



அன்பு அனைத்துக்கும்
giving begins with you

ANNUAL REPORT

2022-23



Mission

World-class care within everybody's reach.

Vision

No man is too poor to afford first-grade medical treatment

Values

Care, Compassion, Commitment, Charity,
Empathy, Quality Service

Quality Policy

Meenakshi Mission Hospital & Research Centre, in pursuit of excellence, is committed to comply with applicable requirements for developing and providing world class health care at an affordable cost.

We shall foster an environment in which every person is motivated to continually improve the efficiency and effectiveness in the management of health care services.

ANNUAL REPORT 2023

Concept and Compilation
Resource & Development Department

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About S.R. Trust

"For over three decades, Meenakshi Mission Hospital and Research Center has established itself as a renowned institution in southern Tamil Nadu, revered by households far and wide. With an unwavering commitment to delivering world-class healthcare services at affordable rates, Meenakshi Mission Hospital and Research Center has become synonymous with excellence in the region. Our healthcare model has been meticulously crafted to tackle the ever-evolving challenges of the medical field, providing comprehensive and holistic services that cater to the diverse medical needs of the community.

Under the stewardship of S.R. Trust, a non-profit organization registered under the Indian Trust Act in 1985, Meenakshi Mission Hospital and Research Center embarked on its journey as a modest bed facility. Today, it stands as a beacon of progress, equipped with state-of-the-art technologies and advanced treatment methods, enabling patients to experience rapid healing and recovery. In our relentless pursuit of excellence, we remain dedicated to serving our community with unwavering compassion and integrity."

Founder

Dr. N. Sethuraman

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From the **CHAIRMAN'S DESK**



Hi all esteemed readers and community members,

It is with great pleasure and deep gratitude that I address you, as we celebrate another remarkable year of our progress and achievement. Meenakshi Mission Hospital has been a beacon of hope and healing for our community, and I am honored to serve as Chairman of this esteemed institution.

More than 33 years, we have remained steadfast in our commitment to delivering the highest quality of healthcare services to our patients. Our extraordinary dedication to excellence, compassion, and innovation has positioned us as a trusted healthcare provider, inspiring hope and transforming lives in the process.

As we reflect upon the past year, we are reminded of the countless lives touched and transformed within the walls of our hospital. Each patient who walks through our doors brings with them a unique story, a journey that intertwines with our own. It is our responsibility, and indeed our privilege, to ensure that their experience is one of healing, comfort, and empowerment.

Our success is a testament to the collective efforts of our exceptional team. From our skilled physicians, nurses and every member of the Meenakshi Mission Hospital family

plays an integral role in our ability to provide comprehensive and compassionate care. I extend my heartfelt appreciation to all of you for your unwavering commitment, professionalism, and passion for service.

Our steady focus on patient care has been the cornerstone of our success. We understand that behind every medical case lies a unique individual, a family, and a community entrusting us with their well-being. This sacred responsibility fuels our passion to go above and beyond, ensuring that each patient receives personalized attention, utmost compassion, and the highest standard of care.

Furthermore, we have embraced technological advancements and pursued innovative solutions to enhance our capabilities. By investing in state-of-the-art medical equipment, fostering research and development, and nurturing collaborations with leading institutions, we continue to push the boundaries of medical science and redefine what is possible in healthcare.

However, our success extends beyond the confines of our hospital walls. Meenakshi Mission Hospital has always been deeply rooted in the community we serve. Through our various outreach programs, we have been able to extend our healing touch to the

underserved, ensuring that healthcare is accessible to all. This commitment to social responsibility remains at the core of our values, guiding us as we strive to make a lasting impact on the health and well-being of our society.

As we embark on the journey ahead, let us embrace the opportunities that lie before us. Let us continue to innovate, push boundaries, and deliver healthcare services that exceed expectations. Together, we can shape a future where Meenakshi Mission Hospital becomes a center of excellence, a symbol of compassion, and a catalyst for positive change in healthcare.

Recently, we have upgraded our breast cancer center by establishing Mammi, a cancer assessment equipment, and Tomotherapy, an advanced cancer treatment equipment.

This year, we have been honored with several prestigious awards, including the FICCI award, CII award, and News 18 award for Best Multi Super Specialty Hospital, Accident & Emergency, Imaging Sciences, and Best Charitable Service, respectively.

MMHRC is also going global by creating an additional facility for international patients. We hope to commence its functions by next year. As we chart our course for the future, we remain steadfast in our pursuit of excellence and our dedication to serving humanity. We will continue to invest in cutting-edge technologies, nurture the talents of our staff, and forge strategic collaborations that amplify our impact.

In closing, I am filled with an overwhelming sense of pride for all that we have accomplished and an unwavering sense of hope for what lies ahead. Together, let us continue to build on our achievements, to reach new heights, and to make a meaningful difference in the lives of those who turn to us for care and I extend my deepest gratitude to our esteemed board members, dedicated staff, partners, and all those who have supported us on this remarkable journey. Your powerful belief in our mission has been the driving force behind our success..



Dr. S. Gurushankar
Chairman

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ACCIDENT & EMERGENCY MEDICINE



At Meenakshi Mission Hospital & Research Centre, we believe in delivering the best in health care to all our patients at all times. The Emergency department simply portrays this vision. Our department is one of the largest and busiest Emergency departments in South Tamil Nadu; not just in terms of dimension, but also in excellence owing to the highly skilled, qualified emergency physicians, who are available round the clock, to save lives.

'Zero waiting time' has been successfully sustained by the committed emergency rescue team while providing appropriate and timely care to almost all the patients. Reviving patients from cardiac arrests has been a trademark of us with more than 70% of success rate.

Emergency department is at the frontline of the hospital's medical care services. Its uniqueness resides in its own primary existence to provide emergency medical health care & education. In fulfillment of its mission, the department strives to provide acute emergency care for all major medical and surgical emergencies, and also acute minor emergencies, 24 hours a day, seven days a week, all year around.

Being the foremost tertiary referral centre and level one trauma centre in this region, the hospital attends to the most sick, complicated, critically ill and severely injured patients. The emergency team at the department takes utmost care of such patients by triaging them immediately on arrival, resuscitating and stabilizing them before shifting to Intensive Care Units under specialized departments.

The driving motto of the department is care to all the patients at par with the current international standards of emergency medical sciences.

Academic activities

Master in Emergency Medicine (MEM)

MMHRC Institute of Emergency Medicine in collaboration with George Washington University (GWU), Washington DC, USA launched a 3 year postgraduate Master in Emergency Medicine (MEM) program continuing since July 2014.

Institute of Emergency Medicine has successfully enrolled 10th batch of MEM residents. Our residents are serving all over the world.

B.Sc (Accident and Emergency Care Technology)

The Degree Course B.Sc. (Accident and Emergency Care Technology) is affiliated to Dr. M.G.R Medical University, Chennai, Tamil Nadu. The course has been successfully continuing since 2011. This course prepares trained, competent emergency medical technicians to work in hospital as well as in the ambulance. Special training programmes are being conducted for nurses and paramedic to upgrade their knowledge and skills in managing patients, assisting in procedures and documentation.

American Heart Association (AHA) accredited International Training centre for Life support courses:

MMHRC is the first accredited American Heart Association (AHA) International Training centre in South Tamil Nadu for life support courses.

Besides academic initiatives, the Institute of Emergency Medicine has been actively involved in raising awareness on Emergency care and First aid. It has been associated with various medical colleges, institutes across South Tamil Nadu to train General Physicians, nurses and paramedic staff on emergency and trauma care. The department has also been associated with the Red Cross and Tamil Nadu Police Department to raise public awareness on Drug abuse and to commemorate First Aid by educating the masses on the importance of First Aid services.

Awards and appreciations

1. Our hospital received the “Stroke Champions Diamond Status” award by World Stroke organization (WSO) & ANGELS for its commitment and timely treatment to stroke patients.



2. We have received an award for “Excellence in Emergency & Trauma Care in Tamil Nadu” consecutively for the second time by the Confederation of Indian Industry at CII Tamil Nadu Medclave 2022, Chennai from **Thiru. Ma Subramanian**, Hon'ble Minister for Health, Medical Education & Family Welfare, Govt. of Tamil Nadu, November 2022.



3. Our Department's service on Emergency Medicine & Care has been featured in the International Federation for Emergency Medicine (IFEM) annual report, released in Melbourne, Australia.

Workshop / training program by Institute of emergency medicine

1. Organized the Workshop on Clinical Toxicology "Tox Care 2022" as a part of the Emergency Medicine Conclave at Dr. Moopen's Medical College, Wayanad, May 2022.
2. Organized Emergency Care Training Program for the officers of Points of Entry Health Organization at Meenakshi Mission Hospital and Research Center (MMHRC), Madurai in association with the Government of India, Ministry of Health & Family Welfare, Directorate General of Health Service, Central International Health Division, March 2023.
3. Invited as a faculty with our team to conduct a Toxicology workshop which is a structured hands-on educational training program at the 18th annual conference of The Association of Physicians of India (API) – Tamil Nadu State Chapter - TAPICON 2022.
4. Invited by National Center of Disease Control (NCDC), Government of India & WHO for the live drill on Chemical Emergencies during Consultative Workshop on the Public Health Management of Chemical Emergencies, National Disaster Response Force (NDRF), July 2022.

Dr. Narendra Nath Jena (Director & HOD, Institute of Emergency Medicine)

1. Honored to receive "Distinguished service in Clinical Toxicology" award by Indian Society of Toxicology (IST) during TOXOCAN - 16 at Kasturba Medical College, Mangalore.
2. Received an Honor award at the International Emergency Medicine conclave - EmerGenZ 2022 in Calicut on Emergency Medicine Day 2022 for the contribution to Emergency Medicine, May 24, 2022.
3. Honored by The American Heart Association (AHA) as a Regional Faculty - India at the Regional Faculty meet, MGM Medical college & Hospital, Mumbai, June 2022.
4. Invited as a speaker in the Emergency Toxicology Management Symposium Organized by Department of Emergency Medicine & Toxicology, All India Institute of Medical Sciences (AIIMS), Bibinagar, Hyderabad, April 2022.
5. Invited as a speaker at the 21st International Federation for Emergency Medicine (ICEM) hybrid conference at Melbourne, Australia.
6. Invited as a Speaker at National Symposium on Clinical Toxicology at Jaipur organized by Manipal Hospitals in association with The Indian College of Emergency Medicine (TICEM), Indian Sepsis Forum & Indian Society of Toxicology, August 2022.
7. Invited as a guest speaker at the State conference on Toxicology TOX REMEDYCON 2023 organized by Meenakshi Hospital, Tanjore, March 2023.

Publications

1. A Case Report on MIS-C Post Covid Myocardial dysfunction – March 2022, MMJ Issue 3, Volume 31, Pg. 8 – 11.
2. A Case Report on Food Induced Methemoglobinemia – July & August 2022, MMJ Pg 11 – 13.
3. A Case Report on Stroke Chameleons The Missed Stroke – September 2022, MMJ Pg. 14 – 16.
4. A Case Report on Methamphetamine Poisoning – October 2022, MMJ Pg. 10 & 11.
5. A Case Report on PRES in Postpartum Preeclamptic Women presenting with Blindness – November 2022, MMJ Issue 11, Volume 31, Pg. 6 & 7.
6. A Case Report on Snake bite Envenomation induced Myocardial Infarction and Ischemic Stroke – December 2022, MMJ Pg. 6 – 8.
7. A Case Report on Domperidone induced ExtraPyramidal Syndrome – January 2023, MMJ Issue 1, Volume 32, Pg. 7 & 8.
8. A Case Report on Prolonged Cardiopulmonary Resuscitation in a gravid woman with IUD – February 2023, MMJ Issue Volume 33 Pg. 7-8.
9. A Case Report on SGLT 2 Inhibitors induced Euglycemic DKA - March 2023, MMJ Issue, Volume 34, Pg. 7-8.

Future plan

1. Resuscitation India summit 2023 and beyond! National conference on resuscitation science, on 20th & 21st May 2023.
2. Workshop on Clinical Toxicology and Neuroemergency on 19th May 2023.
3. Annual Emergency Medicine & Clinical Toxicology Conference, February 2024.





ANESTHESIOLOGY AND PAIN CLINIC



Adhering to Mission & Vision of our hospital we provide excellent anaesthesia service with the Modern Techniques in our armamentarium include Supreme LMA, AIR. Q Laryngeal airway, Fibroptic bronchoscopy to handle difficult airway. In addition to these, Baska mask was added recently. We have Ambu Airway Scope, Videolaryngoscope (King Vision VL) for adults and (Mc. Grath Videolaryngoscope) for Paediatrics to handle the difficult airway. Our facilities include Ultrasound machine (GE Venus) to aid in central venous catheter insertion and to perform peripheral nerve block. We have modern ultrasound machine with latest features to provide advanced procedures like USGRA & USGVA.

Bispectral Index Monitor (BIS) Aspect and Patient State Index (PSI) Masimo monitor help us in preventing awareness during anaesthesia & surgery.

Brain function monitoring and Regional Oxygen saturation monitoring recently added to our department gadgets. We have continuous cardiac output monitoring (Flotrac) and modern anaesthesia work stations for better patient care.

We have Level - I rapid infuser system, which helps us in replacing major volume of blood loss

which can infuse Blood / Fluid at a rate of 1200ml/minute in a warm state. We transfuse blood and blood products based on TEG (Thromboelastogram) in patients with coagulation abnormalities and Liver transplant surgeries. We are monitoring blood loss by using Non Invasive continuous SpHb (Rainbow Pulse Oximeter).

With experienced Senior Consultants, Consultants, Registrars and committed hardworking Post-Graduates and Medical Officers, our department runs Fifteen Operation Theatres, Twenty Bedded Intensive Respiratory Care Unit, Pain Clinic and Code Blue Emergency Services round the clock.

Our service extends even NORA (Non operating Room Anaesthesia) like providing sedation and anaesthesia for CT scan, MRI, GI Endoscopy and Oncological procedures, especially Paediatric Oncology. Now we extended our service to "Anaesthesia for Bronchoscopic procedures.

We have been providing Obstetric Analgesia (Painless Labour) routinely as on patient's request. This service is taken care of by Senior Anaesthesiologist round the clock.

We extended our service in Paediatric Oncology by securing central venous cannulation in small children for Bone Marrow transplants and Chemotherapy administration.

We have been providing post operative pain management with the aid of infusion pumps / PCA Pumps / Continuous nerve blocks / Epidural Analgesia.

Our recent developments are Liver Transplant, Robotic Bariatric, Oncological and gynaecological Surgery. We have operated more than 500 surgeries through Robotic Technology. Point of care Ultrasonography (POCUS), Airway Ultrasound and TEE are new additions to patient care. We are also planning for ECMO in High Risk Surgical patients. We are upgrading our Operation Theatres to environment friendly by adapting Green OR concept.

The National Board of Examination in Medical Sciences offered 5 DNB (Anaesthesiology) seats every year and we produced 75 students who passed successfully and working in various multispeciality hospitals.

Pain clinic:

Chronic pain is a common, complex and distressing problem that has profound impact on individuals and society. Managing such pain conditions is different art.

Our Pain Clinic is above 25 years old, providing evidence based, state of art treatment modalities for chronic pain conditions. We treat both Cancer Pain and Non Cancer Pain which includes Headache, Facial Pain, Post Hepatic Neuralgia, Neck Pain, Back Pain, Neuropathic Pain, Complex Regional Pain syndrome. Musculo skeletal and joint pains.

Our interventional pain management includes

Fluoroscopic guided Interventions, Ultrasound guided interventions for Headache, Facial Pain, Joint Pain, Back Pain, Cancer Pain, Musculoskeletal Pain, Nerve Blocks.

- Sympathetic Block
- Prolotherapy
- Regenerative Therapy
- Hydrodissection for Nerve Entrapment
- Small Peripheral Nerve Blocks
- Radiofrequency Lesioning / Ablation
- Chemical Neurolysis

We provide all the recent advances in chronic pain management which includes Neuromodulation. Cryoablation, Joint Denevation therapy - Genicular Nerve Blocks.





ANDROLOGY & UROLOGY



Introduction

The Department of Andrology & Urology at MMHRC is a tertiary care centre preferred by many patients, referring Physicians and Urologists in South Tamil Nadu.

It is one of the oldest and most trusted centres of Urological care in the region. Most patients have multiple co-morbidities. Multidisciplinary approach to the life threatening conditions encountered offers a great deal of success.

New procedures & techniques

Robotic Surgery in Genito-Urinary Surgery

Robotics in surgery is the latest happening in the medical field. The precision, dexterity and high definition vision offered with robotic technology is unparalleled. This technology is essentially the doctor at the helm of the robot and it is completely under the guidance of the operating surgeon. The advantages of the procedure are minimally invasive, less bleeding and ease of performance of difficult procedures. In Urology, all kinds of procedures like robotic radical prostatectomy, robotic partial nephrectomy, robotic pyeloplasty, robotic nephrectomy and nephroureterectomy are being offered. MMHRC is the only center in entire South Tamil Nadu to be equipped with this precise and most modern technology.

Retrograde Intrarenal Surgery for Renal Stone Disease

Retrograde Intrarenal surgery (RIRS) is the most advanced and recent technology for treatment of renal stones upto 2 cm in size. A Flexible Ureterorenoscope is used to access all areas of the kidney and the stone is dusted to powder with LASER. The greatest advantage of this technology is that it is done through the urinary passage itself and there is no incision involved. The benefits of the surgery are that there is no incision at all even though it is a surgery, earlier return to work, very minimal chance of bleeding and least complication rate. The distinct advantages of RIRS are for patients with abnormally located or malrotated kidneys, morbidly obese patients, pregnant patients, patients on antiplatelets / anticoagulants, bleeding disorder patients where other modalities of treatment for stones cannot be put to use. RIRS is regularly done at MMHRC. The world's most advanced innovation is offered to all kinds of above stated patients. We have successfully performed over 1000 RIRS procedures including very complex scenarios as anomalous kidneys, pregnancy, infants, morbidly obese and patients with bleeding diathesis.

Stone Management

Endourological stone management involves state of the art instrumentation and expertise. All forms

of stone treatment namely PCNL (Percutaneous Nephrolithotomy), Tubeless PCNL, RIRS (Retrograde Intrarenal surgery using Laser), Laser Lithotripsy and ESWL (Extracorporeal shock wave lithotripsy) are available under one roof. Mini PCNL - where stones are broken with a small hole by using fine instruments is also undertaken. ECIRS (Endoscopic combined Intra-renal surgery) is offered for complex Renal stone disease.

The stone clearance rate of our institute is way ahead of International standards. The success is mainly attributed to the expertise, dedicated staff, team work, availability of advanced technology including RIRS and LASER.

Paediatric Urology

Paediatric stone management is also advanced to the core - Mini PCNL, RIRS and ESWL are routinely performed. Infantile urolithiasis has also been managed with Mini PCNL and RIRS. Detailed metabolic work up is done and treatment tailored according to the metabolic abnormality.

All Paediatric Urological surgeries are being performed routinely. Some of the very notable surgeries are Laser Fulguration of Posterior Urethral valve immediately after birth and complex reconstruction surgeries for Congenital anomalies in infancy.

Prostate

Bipolar TURP is being offered. Bipolar TURP involves less bleeding and complications as compared to Monopolar TURP. Laser Vaporization and Enucleation of the Prostate is offered for patients even on blood thinners (Antiplatelet medication).

Erectile Dysfunction

Nowadays, marital disharmony is increasing due to Male sexual dysfunction. But the people do not have awareness as to whom to approach for the proper treatment. At our centre, we are having fully fledged Andrology department and it is the only fully fledged Department in the entire south Tamil Nadu. We are getting patients from Kerala and Chennai also. Most of the patients require good counseling and some medications. For patients with organic problems, who are not amenable for medication, we are the only centre doing Penile Prosthesis in this region. The department is fully equipped with Rigiscan & EEJ.

Uro-oncology

Radical surgery for cancer of the Bladder and Nephrectomy (Radical / Partial) for cancer of the kidney is routinely performed. Partial Nephrectomy (Nephron sparing surgery) is being actively offered in the Management of Renal tumours less than 7cm.

Renal Transplantation

Around 40-45 Renal Transplantation are being performed every year.

Complicated Urinary Tract Infection

The amount of cases with Urosepsis due to Pyelonephritis (Including Emphysematous Pyelonephritis) and uncontrolled Diabetes are on the rise. These cases are managed successfully mainly by teamwork including Nephrologist, Radiologist, Diabetologist, Intensivist and Physician.

Academic activities

Many of the patients from the camps receive concessional treatment at MMHRC. The Department of Urology continues its high profile work in all areas of Urology.

The Department of Andrology conducts camps for examination of patients and popularizes the role of the Andrologist in the treatment of sexual disorder.

The PG (DNB) programme goes on and this year two PG's cleared their examinations. In various Regional, Zonal and National Urology conferences our Post Graduates presented papers.

Data

Out-patient	-	12260
In-patient	-	2408

Future Plan

To offer the most recent innovation and the most advanced technologies in the field of Urology at an affordable cost to all the needy. Quality and service assurance to everyone, crossing the all barriers is our Motto.

Doctors Team

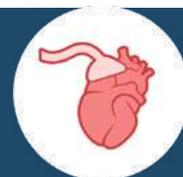
Dr. R. Ravichandran, MS., DNB (Urology)
Senior Consultant & HOD

Dr. Paul Vincent DNB.,(Gen. sur) DNB.,(Uro)
Senior Consultant

Dr. K.Venugopal M.S, DNB (Urology)
Consultant



CARDIAC ANAESTHESIOLOGY AND CRITICAL CARE



Introduction

It is impossible to say when or who began cardiac anaesthesiology, but it is possible to describe the evolution of this new medical specialty over the past seventy-five years. Cardiac Anaesthesiology can be defined as the aesthetic practice focused on the preoperative, intraoperative and postoperative evaluation and management of patients with cardiac and intrathoracic vascular disease. Those practicing cardiac anaesthesiology generate new knowledge applicable to all, but have a primary focus on cardiovascular, pulmonary, renal and central nervous systems. Cardiac anaesthesiology has evolved spectacularly especially over the past 35 years, changing from a practice focused on the anaesthetic management of patients with cardiovascular diseases to a practice of cardiovascular medicine that contributes to the medical and surgical management of cardiovascular patients.

In our hospital, Cardiac Anaesthesiology has evolved over the past 20 years. Our vision is to innovate and deliver high quality, cost effective anaesthesia care and pain management; to

create rewarding careers for our staff; and to develop leadership in the field of cardiothoracic anaesthesia, Cardiac Critical care, Cardiovascular Dialectology and Cardiac rehabilitation.

Statistics

The caseload comprises approximately 602 cardiac procedures of which 440 represent patients undergoing coronary bypass grafting, 93 valve repair or replacement, 20 combined procedures, 21 congenital procedures, 17 Thoracic procedures and 3 Cardiac tumour excision. This covers the entire gamut of cardiothoracic anaesthesia i.e. anaesthesia for Coronary Artery Bypass surgery, Valvular heart surgery, Congenital cardiac surgery and Thoracic & Vascular surgery. About 98.5% of our coronary revascularisation has been done on a beating heart, which requires quality care anaesthesia and immense hemodynamic monitoring.

Facilities

- A well-equipped theatre with an invasive multi-channel monitor including monitoring of ETCO2 and Cardiac Output.

- Nine-bedded CTS-ICU and Thirty bedded Cardiology ICU with multichannel monitors, latest Ventilators, and IABP machines.
- Trans Esophageal Echocardiography.
- Thromboelastography (TEG).
- Extra Corporeal Membrane Oxygenation (ECMO)
- A dedicated, well-trained staff is always in attendance, and each patient receives individual care by a single nursing personnel.
- An anaesthesiologist is available round-the-clock, and nothing is left to chance. This assures adequate post-operative care of the cardiac patient.
- In cardiac and post-cardiac surgical patients requiring prolonged mechanical ventilation, percutaneous tracheostomy is performed on a routine basis to facilitate secretion removal and to wean off from ventilator.

Cardiac critical care

We the Department of Cardiac Anesthesiology and Critical care, take care of ventilated, NIV and High risk cases in Cardiology intensive Care Unit. Cardiology Intensive care unit is a 30 bedded ICU and being a tertiary care hospital, majority of the cases are high risk sick cases (Acute Myocardial infarction, Cardiogenic shock, Acute Pulmonary edema, Post Coronary Intervention Complications) which are managed from the admission to discharge by our team. We have round the clock coverage with our team to take care of Ventilator, NIV and other High risk cases on Inotropic/ Vasopressor support.

Extra Corporeal Membrane Oxygenation (ECMO)

Extracorporeal membrane oxygenation (ECMO) is a rescue therapy to support patients with acutely life-threatening cardiac and/or respiratory dysfunction when conventional therapies fail. Management of patients with multiple co morbidities and who are not candidates for surgery due to increased peoriperative risk has required adopting collaborative team based model consisting of cardiologists, intensivists, cardiac surgeons, perfusionists and nursing staff. A growing number of PCIs have been performed using the venoarterial extracorporeal membrane oxygenation (VA-ECMO), both during rescue intervention in acute heart attacks or elective High risk-Percutaneous Intervention (HR-PCI), to maintain good blood flow to all important organs and prevent further hemodynamic deteriorations. In daily clinical practice, circulatory support has been provided using different temporary percutaneous devices, as the “traditional” intra-aortic balloon pump (IABP), the Impella or the Tandem Heart platforms, or the VA ECMO. Despite the widespread diffusion of cardiac care unit (CCU) and even more sophisticated modern therapies for managing cardiac ischemia, a small, but not neglectable proportion of HR-PCI patients require VA-ECMO, hemodynamic and ventilatory support in cardiac care unit (CCU). We have performed two cases of ECMO guided High risk Percutaneous Coronary Interventions (PCI) successfully at MMHRC.



Accomplishments

- Dr. S. Kumar was elected as President Elect, Indian Society of Anesthesiologists (ISA) Tamilnadu, for a period of three years (from Oct. 2019 to Oct. 2021).
- Dr. S. Kumar was elected as President, Indian Society of Anesthesiologists (ISA) Tamilnadu for a period of one year (from Oct. 2021 to Oct. 2022).
- Dr. S. Kumar was elected as National Treasurer, Indian Association of Cardiovascular Thoracic Anesthesiologists (IACTA) for a period of three years (from March 2022 to Feb. 2025).
- Dr. S. Kumar as an Organising Secretary organised a National Conference of Indian Association of Cardiovascular Thoracic Anesthesiologists (IACTACON 2022) at Madurai in March 2022.
- Dr. K Balamurugan as an Organising Treasurer organised a National Conference of Indian Association of Cardiovascular Thoracic Anesthesiologists (IACTACON 2022) at Madurai in March 2022.
- We have been approved for Two Seats of DNB Cardiac anesthesiology per year by National Board of Examinations (NBE NEW DELHI) from this academic year-2022-23.
- We have two DrNB Cardiac anesthesiology Residents on training from 2022.
- Dr. S. Kumar actively participated as Virtual Faculty in State Conference of Indian Society of Anesthesiologists (ISACON Tamilnadu 2021) in Oct. 2021.
- Dr. S. Kumar actively participated as Faculty in National Conference of Indian Association of Cardiovascular Thoracic Anesthesiologists (IACTACON 2022) at Madurai in March 2022.
- Dr. K. Balamurugan actively participated as Faculty in National Conference of Indian Association of Cardiovascular Thoracic Anesthesiologists (IACTACON 2022) at Madurai in March 2022.
- Dr. Dhinalaran Daniel actively participated as Faculty in National Conference of Indian Association of Cardiovascular Thoracic Anesthesiologists (IACTACON 2022) at Madurai in March 2022.
- Dr. S. Kumar actively participated as Faculty-Speaker in State Conference of Indian Society of Anesthesiologists (ISACON Tamilnadu 2022) at Madurai in July 2022.
- Dr. S. Kumar actively participated as Faculty in Indian Society of Anesthesiologists Tamilnadu PG Assembly in February 2023.
- Dr. S. Kumar actively participated as Faculty-Speaker in National Conference of Indian Association of Cardiovascular Thoracic Anesthesiologists (IACTACON 2023) at Jodhpur in February 2023.

Academic activities

- A host of academic activities form part of the calendar and ensures that the team is kept abreast of the latest developments in anaesthesia.
- Dr. S. Kumar actively participated as Virtual Faculty in TEE National Conference of Indian Association of Cardiovascular Thoracic Anesthesiologists (IACTACON TEE 2021) in August 2021 at Narayana Hirudhayalaya, Bangalore.
- Dr. S. Kumar actively participated as Virtual Faculty in Indian Society of Anesthesiologists Tamilnadu PG CONCLAVE in May 2021.

Future

Looming large on the horizon are the prospects of

- Heart failure surgeries.
- Heart Transplantation.
- Mechanical assist devices (ECMO, Ventricular assist devices-VADS).
- Key-hole Robotic Cardiac surgeries.
- Thoracoscopic Lung Surgeries.



CARDIOLOGY



Introduction

The Interventional Cardiology Department has made significant progress in the past year, providing state-of-the-art treatments to patients suffering from various cardiac conditions. Our department is dedicated to delivering the best quality care to our patients, and we are committed to improving patient outcomes by continuously updating our knowledge and techniques.

Procedures

In the past year, we performed 2,200 angioplasties, which is a significant increase of 25% compared to the previous year. In March 2023, we performed 211 angioplasties, which is the highest number of procedures conducted in Tamil Nadu. We are proud of this achievement and will continue to provide the highest standard of care to our patients.

Centres of excellence

We are pleased to announce that our centre is the top-performing centre of excellence for OCT image-guided Intervention in the region. This achievement is the result of the hard work

and dedication of our team of interventional cardiologists, nurses, and staff. We will continue to strive for excellence in this area and ensure that our patients receive the most advanced treatments available.

Patient care

Our focus on patient care has always been a priority, and in the past year, we have made significant improvements in this area. We have increased patient satisfaction by implementing various patient-centric initiatives such as patient education programs, personalized care plans, and patient feedback mechanisms. Our team is dedicated to providing compassionate and empathetic care to all our patients.

Complex interventions

Our department offers a range of complex interventions, including rota-assisted angioplasty, image-guided angioplasty, lot pacing, his bundle pacing, TAVR, TEVAR, and device closure for ASD, VSD and VSR. These interventions require advanced techniques and state-of-the-art equipment, and our team has demonstrated expertise and proficiency in performing these procedures.

Electrophysiology (EP) & Heart Failure Unit (AHF) unit

Electrophysiology is one of evolving unit in cardiology. This unit is specialized for dealing with heart rhythm related abnormalities like fast, slow and irregular heartbeats. It is one for improving mortality by preventing sudden cardiac deaths in various disorders in cardiology.

In South Tamil Nadu, we have a dedicated separate electrophysiology lab (EP) with inbuilt of latest 2D & 3D SYSTEM. We have separate device clinic which deals with pacemaker/ICD/CRT-P/D/LBB pacing and follow-up. In the past year we performed around 500 EP procedures like 2D & 3D guided mapping and Radio frequency ablation (RFA) and in implanted 250 devices. We are planning to establish dedicated heart failure unit which is important to achieve the heart transplant unit.

We are conducting annual conference in the name (Arrhythmic and Heart failure conclave) in national level. Our electrophysiologist is the faculty of various EP forums both in national and international level that includes IHRS, TNEPIC, APHRS and HRS.

Research and education

The department is committed to research and education, and in the past year, we have participated in various international and national conferences to stay updated with the latest advances in the field. We have also conducted several research studies that have been published in renowned international journals. Our department is also committed to providing training

and education to the next generation of interventional cardiologists through fellowships and training programs.

DNB accreditation for fellowship in interventional cardiology

We are pleased to announce that our department is one of the few centers to have DNB accreditation for fellowship in interventional cardiology. This recognition is a testament to our commitment to education and training, and our dedication to preparing the next generation of cardiologists to deliver advanced and complex care to patients

Faculty invitations

We are proud to announce that our consultants have been invited as faculty members in various international and national cardiology conferences, including TCT, EuroPCR, Indialive, IPCI, and In-Japanese CTo Club. Our team has presented research studies, case reports, and advanced techniques at these conferences, contributing to the advancement of the field of cardiology.

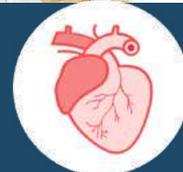
Conclusion

The Interventional Cardiology Department has made significant progress in the past year, achieving excellent patient outcomes and providing state-of-the-art care. We will continue to focus on providing the highest quality care to our patients, and we look forward to further progress and success in the coming year. We thank our patients for their trust and confidence in us and our team for their hard work and dedication.





CARDIOTHORACIC AND VASCULAR SURGERY



Introduction

The department of Cardiothoracic Surgery in Meenakshi Mission Hospital continues to march ahead in providing excellent care to patients with cardiothoracic diseases with improved efficiency and quality.

It has entered the Nineteenth year of its activities after rejuvenation in 2003.

Coronary revascularisation surgery

In Coronary Revascularisation surgery, the main emphasis is on Beating Heart CABG because of significant reduction in morbidity and cost. About 97 % of our coronary revascularisation has been done on beating heart. We have a large volume of left main coronary artery stenosis treated with CABG with outstanding results that can be very well comparable with international data. We emphasize on total arterial revascularisation to achieve better patency rate of the grafts. We undertake all high-risk cases like those with low ejection fraction, ventricular aneurysm, concomitant carotid stenosis, Acute Aortic dissections, ischemic mitral regurgitation and some thoracic cases such as pneumonectomies and lobectomies.

Valvular heart surgeries

In Valvular heart disease, apart from routine valve replacement, Valve Repair is also been done. Valve repairs by experienced surgeons have been found to offer substantial advantage over replacements in terms of lowering the valve related complications. We, in our department also offer valve repair to suitable patients and have shown good results.

Congenital heart surgeries

In Congenital heart surgery, the common operations like ASD, RSOV, VSD and PDA are being done routinely. We have also performed high-risk complex operations like Total Correction of Tetralogy of Fallot, DORV. In keeping with the latest trends in surgery, minimal invasive techniques are being increasingly applied. Now we have started doing minimally invasive coronary bypass surgery in selected patients.

Our results have been very gratifying with internationally acceptable results. Even in emergency operations performed in patients in Cardiogenic shock, the department had shown good results. We are one of the few units in the

country offering Endoscopic Vein Harvesting Technology to our patients at affordable cost.

Infrastructure

The operation theatre dedicated to cardiothoracic surgery is a state-of-the-art facility with a seamless stainless steel cladding of the walls.

Our OT has started using the new methods of sterilization techniques with silver nitrate and hydrogen peroxide (Ecoshield) solutions.

All these things will help to reduce the infection rate to zero. There is a ten-bedded ICU with all the latest gadgets available in the most developed centers in India. We have 3 Intra-aortic balloon Pumps to salvage patients with Myocardial Infarction in Cardiogenic shock.

An Endoscopic Tower has been procured for Endoscopic Vein harvesting.

Academic activities

The department has not lagged behind in Academic activities.

We regularly attend conferences and workshops conducted in National and International levels, thereby pacing ourselves with the current trends in cardiac surgery.

The National Board of Examinations has recognized our department for training students

in this branch leading to DNB (Cardiothoracic Surgery) with duration of six years. We have six students currently. There is a sanction for intake of one student annually.

Conferences / workshop attended

1. Attended IACTS conference 2023 at Coimbatore.
2. Attended Aortic workshop at Chennai and Coimbatore.

Papers presented

1. Rare Case of Post –CABG paraplegia at IACTS Conference.

Statistics

The total number of cases done from April 2022 to March 2023 is 602.

Future Challenges

The future looks very encouraging. We, in the Department of Cardiothoracic Surgery share the dreams of our Chairman to perform Heart Transplantations, Heart and Lung transplantation and minimally invasive cardiac surgery and key-Hole Robotic Cardiac surgeries before long in our institution.





CHILD DEVELOPMENT CENTRE



Introduction

Meenakshi Mission Hospital and Research Center is tertiary care multi-speciality hospital in Madurai, India. Under one roof the hospital has the entire range of facilities and professional specialization in the comprehensive evaluation and management of the children with development needs from birth through adolescence.

MEENAKSHI CDC is a specialized unit in the department of paediatrics with the mission of providing high quality, family centered service for children with developmental needs within a transdisciplinary framework. The goal is to assist every child to achieve his or her full potential.

Trans disciplinary approach

Approach to treatment integrates expertise and experience from several different and related professional discipline. Each professional provides input, data and concepts to Maximize each child individual treatment gains.

Our meenakshi CDC team

- Developmental Paediatrician,
- Paediatric Orthopaedics
- Paediatric Neurology
- Genetist
- ENT Surgeon
- Psychiatrist
- Ophthamologist
- Physiotherapists
- Occupationaltherapist
- Speech therapist & Lanquage therapist
- Cilinical Psychologist
- Social worker and counsellor
- Nutrition specialist
- Multi sensory therapist
- Special Educator



Departmental activities

- World Down Syndrome Day celebration
- World Autism Day celebration
- Weekend Group Therapy
 - 1st week : Parental wellbeing programme
 - 2nd week: Spastic kids fine motors activities
 - 3rd week: DOWN SYNDROME kids multi sensory activities
 - 4th week : ASD & ADHD

Statistics

- Physiotherapy - 1877
- Occupational Therapy - 1762
- Speech Therapy - 901
- Clinical Psychology - 1222

- Multib Sensory Activity - 735
- Special Education - 182

Future plan

- Hydro Therapy pool
- Outdoor play ground with play items
- Audio visual Lab
- Day care center





CLINICAL RESEARCH



Definition

Any investigation in human subjects intended to discover or verify the clinical, pharmacological and /or other pharmacodynamic effects of an investigational product(s) and /or to identify any adverse reactions to an investigational product(s), and/or to study absorption, distribution, metabolism, and excretion of an investigational product(s) with the object of ascertaining its safety and/or efficacy is called Clinical Research.

Clinical research & MMHRC

- We have been doing regulatory Clinical trials since 2007.
- One of the experienced clinical trial sites in India.
- First Site in Tamil Nadu to have faced & cleared 5 Regulatory Audits (4- USFDA & 01- DCGI).
- One of the Few sites in India capable of doing Phase I to Phase IV Trails.
- One of the few sites in India capable of doing BA BE trails.
- One of the few sites in India capable of conducting trials in new generation drugs.

- We can be proud that from 2007 to till date around 1000 patients would have been benefited from Clinical Research.
- In 2016 we established a full frame Clinical Research Department and from then we structured well with our Management support and evolved to face the next stage of Clinical Trials.
- One of the few sites in India capable of conducting Clinical Trials in different Therapeutic areas (Oncology, Cardiology, Pulmonology, Gastroenterology, Nephrology and Diabetology).
- One of the Few site in India capable of handling satellite sites and can play a role as Contract Research Organization.
- Successfully completed 50+ sponsors audits.

Objective & Focus

- Foresight we are planning to focus in taking projects from different therapeutic areas and to develop a strong study team, capable of handling studies of different indications concurrently.

- Apparently we are working to strengthen our relations with the Pharma giants and developing our capabilities to captivate New Phase trials & government funded projects.
- We forethought of developing satellite sites to improve our capability with the help of our management support to become a prime Centre in Tamil Nadu.
- We plan to start Basic / Fundamental Research with the applications of molecular Biology related to Oncology in the near future.

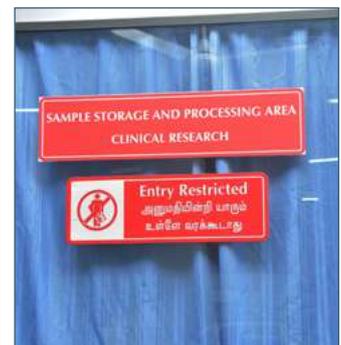
Team structure

- We have a dedicated team of professionals, qualified in GCP R2, New Clinical Trail Rules 2019 and FDA guidelines.
- Experienced in clinical Trials and dedicated Physicians are one of our primary strengths.



Ongoing Clinical Trails at MMHRC							
S.No	Study no.	Indication	Sponsor	CRO	Drug	Phase	Status of Recruitment
1	CLR-15-03	Novel Tyrosine Kinase Inhibitor (TKI), in Subjects with Chronic Myeloid Leukemia (CML)	SPARC	Quintiles	K0706	III	Followup Ongoing
2	484-14	Myelodysplastic Syndrome in Indian Patients"	Intas	lambda	Azacitidine	III	Followup Ongoing
3	CALLA	Cervical cancer	Astrazeneca	Astrazeneca	Durvalumab	III	Followup Ongoing
4	D967JC00001	A HER2-positive Metastatic Breast Cancer (DESTINY-Breast07)	Astrazeneca	Astrazeneca	Trastuzumab Deruxtecan (T-DXd)	Ib	Recruitment Ongoing
5	BAY 1841788	Metastatic hormone-sensitive prostate cancer (mHSPC)	Bayer	Covance	Darolutamide	III	Recruitment Ongoing
6	D9319C00001	BRCA Wild Type Advanced (FIGO Stage III- IV) High Grade Serous or Endometrioid Ovarian Cancer	Astrazeneca	Astrazeneca	Olaparib	III	Recruitment Ongoing

7	IFocus	To Evaluate the Impact of FFR and OCT on the outcomes of PCI in Diabetic patients	NA	Bioquest	NA	NA	Recruitment Ongoing
8	0068-20	Breast cancer	Lambda	Intas	Cyclophosphamide	BABE	Followup Ongoing
9	Nanobiotex	Head & Neck Cancer	Nano biotex	ICON	NBTR3	III	Recruitment Ongoing
10	WOC/WOS/CT-37/14	Diabetes Mellitus	Wockhardt	Wockhardt	Human Insulin	IV	Recruitment Ongoing
11	208657	COPD	GSK	PPD	Mepolizumab	III	Recruitment Ongoing
12	D8532C00001	Estrogen Receptor-Positive, HER2-Negative Advanced Breast Cancer	Astrazeneca	Astrazeneca	Oral SERD	III	Recruitment Ongoing
13	AZBE122005	Brain Tumors	Azidus	Azidus	Lomustine	BABE	Followup Ongoing
14	HCR/III/DENOSOL/121/2019	Solid Tumors	Hetero	Abiogenesis	Denosumab	III	Recruitment Ongoing
15	TPC-CKD- 007	CKD	Thinq	Thinq	Renocholor	IV	Recruitment Ongoing





CRITICAL CARE MEDICINE & TOXICOLOGY



The Critical Care Medicine & Toxicology Unit at MMHRC is a highly specialized department that caters to patients suffering from Critical illness and those who require close Hemodynamic Monitoring. We manage various kinds of poisonings and our unit provides maximum isolation, barrier nursing, sterility and privacy. The department, equipped with 20 beds, provides intensive care and high dependency care in the same unit, with the aid of appropriate pharmaceutical, therapeutic and diagnostic interventions. We offer state-of-the-art treatment for critically ill patients and poisoning cases, backed by trained Critical Care Physicians, Intensivists, Nurses, Physiotherapists, Clinical Pharmacologists, Dieticians and Biomedical Engineers. Our unit is supported by Microbiology, Bio-chemistry and Radiology services, round the clock. A separate Annexe ICU with negative pressure rooms is being utilized for critical patients who require isolation.

Recent additions:

We have recently introduced Teladoc Robot for providing remote assessment, consultation and management of patients, via Telemedicine

Services, thereby paving way for starting Tele ICU services for the first time in South Tamil Nadu.

We have dedicated ultrasound machine for the Intensive Care Unit, all Invasive procedures are done under real-time ultrasound guidance by qualified intensivists, for enhanced patient safety. This also helps in daily screening of respiratory and cardio vascular function in all our patients.

Our unit has been leading centre in managing various poisoning cases. We provide advanced organ support therapies, like Plasmapheresis, CRRT and Charcol Hemoperfusion for different types of poisonings.

Facilities

- Teladoc - For Facilitating Remote Communication, Clinical assesment.
- Consultation and Expert opinions for patient management including Tele ICU.
- Teladoc symbolisis that we are “Always First Always Best” in utilizing modern technology in health care setup.
- Covid care ICU for critically ill patients who need HFNC, NIV / Ventilatory Support.
- Nurse: Patient Ratio 1:1.

- Management of complicated Organo Phosphorous Compound Poison and various other poisonings with encouraging outcomes.
- Mechanical Ventilatory support for post-operative and polytrauma patients.
- Advanced Invasive and Non-Invasive Mechanical Ventilatory therapy.
- Transplant Critical Care.
- Percutaneous dilatational Tracheostomies.
- Diagnostic and therapeutic fibre-Optic bronchoscopy.
- Flotrac Cardiac Output Monitoring.
- ICP Monitoring.
- Transcranial Doppler.
- Invasive monitoring with central venous and arterial cannulation.
- IABP.
- Option for HD / CRRT / PD / SLED.
- ABG Analyser.
- Bed side Ultrasound.
- Sequential compression devices.
- Surface and Fluid warmers.
- Advanced ambulance with ventilatory support for transporting critically ill patients.
- Multi Paramonitors for all beds.
- Orientation, Teaching and Training programme for medics and paramedics.

MMHRC has always been at the forefront of teaching medical and paramedical professionals. In the same spirit, the Department of Critical Care Medicine and Toxicology is a premier training centre for Critical Care Medicine. We are currently recognized to offer 2 seats of DNB Critical Care Medicine (3 Years course conducted by National Board of Examination) with regular teaching and research activities. We are planning to start training programme in Critical Care Medicine for Nurses.

In the near future, We are planning to start full fledged ECMO programme for various clinical indications. This will be a great help for patients suffering from critically ill conditions.





DENTAL AND MAXILLOFACIAL SURGERY



About us

We offer a wide array of high-quality general and cosmetic dentistry services in Meenakshi Mission Hospital. Our dental practice aims to meet the varied requirements of the patients for maintaining their dental health. We have an appointment system in place to ensure that you don't have to wait for longer times for receiving the treatment. A complete dental check up followed by scaling and polishing is a part of several health packages available in our hospital.

Our motto

Get the smile you've always wanted

In Meenakshi Mission Hospital, we believe everyone deserves a chance to get the picture perfect smile that they have always wanted. The best way to achieve this is by maintaining proper oral hygiene and having regular dental checkup once in every 6 months. When the dental problem is addressed in the beginning it becomes minimally invasive and cost effective.

Technology

- RVG (Radio-Visiography).
- OPG (Orthopantomogram).
- Implant dentistry.
- Zirconia crowns & bridges.
- BPS dentures.
- CAD-CAM assisted invisible braces.
- Apex locator and endomotor.
- Laser unit.
- LED airtor.
- Single tooth anaesthesia-THE WAND.
- Digital intra oral scanner.
- Intra oral welder.

Specialities we provide to give the best care

- Oral medicine and radiology.
- Endodontic and conservative dentistry.
- Orthodontics.
- Prosthodontics.

- Periodontics.
- Laser dentistry.
- Oral & maxillofacial surgery.

Our dental surgery team is specialised in

- Preventive dentistry.
- Geriatric dentistry.
- Paediatric dentistry.
- Cosmetic dentistry.

Intraoral scanners: *Let's Go Digital!*

An intraoral scanner is a handheld device used to directly create digital impression data of the oral cavity. Light source from the scanner is projected onto the scan objects, such as full dental arches, and then a 3D model processed by the scanning software will be displayed in real-time on a touch screen.

Digital scan reduces patient discomfort considerably because they do not have to endure the inconveniences and discomfort of traditional impressions, such as unpleasant impression trays and the possibility of gag reflex.

Reduces the chair time required for treatment and scan data can be sent immediately to the dental lab via the software. You can instantly connect with the dental Lab, reducing remakes and faster turnaround times compared to traditional practices.



Special care dentistry

Our team of dentists take special care and caution in providing dental treatment to patients with medical disorders.

Liver failure, kidney failure, malignancies, neurological problems, gastrointestinal problems, endocrine problems, haematological problems & syndromes-. Dental procedures are carried out with advice from their concerned physicians.

Hospital dentistry - It is available for severely ill patients where they are hospitalized specially for their dental ailments and treated after medical intervention.

Pregnancy Oral Care-pregnant women are more prone to gum bleeding and cavities due to their increased hormone levels. It is essential, they have a dental check up and maintain good oral hygiene.



Painless dentistry

Worried about getting a dental injection? No More Stress.

The revolutionary new computer controlled local anaesthesia injection system that conquers fear, pain and anxiety.

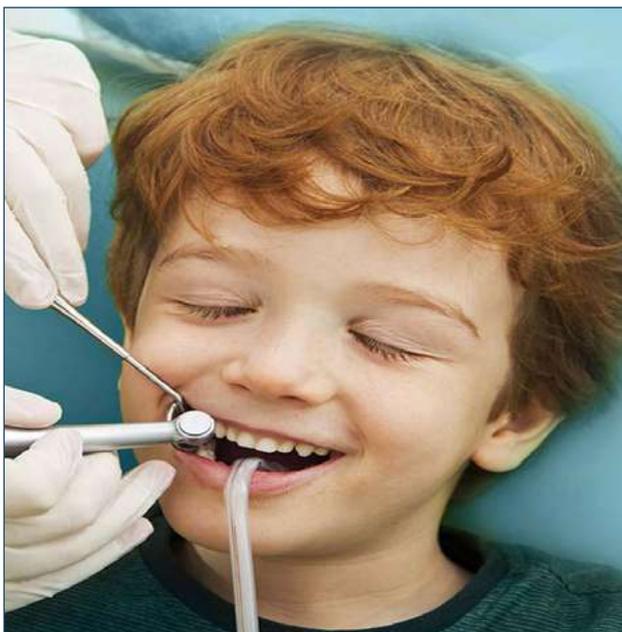
For many of you who are scared of needles and the associated pain, the Wand is the latest computer-controlled anaesthetic delivery system in dentistry.

Advances in technology are significantly enhancing patient comfort both during and after dental treatment. One of these technologies is the single tooth anesthesia (STA) system for giving dental injections. Many patients are not

even aware that the injection has been given. Patients leave the office without the numbness in their cheek, tongue, or lip that often accompany traditional syringe injections. At MMHRC, we use this STA system and other technologies to enhance your comfort and eliminate the stress associated with going to the dentist.

Most dental patients who have had a terrible experience when it comes to getting injections will, more often shy away from visiting the dental clinic. As a result, the dental or oral health problem gets worse, and a more extensive and invasive dental procedure becomes a necessity.

We are adept at using numerous ways to ensure that your visit becomes as painless as possible.



Dental emergencies

We at Meenakshi Mission Hospital are expertise and equipped to deal with dental problems that needs immediate treatment to stop bleeding, alleviate severe pain and save a tooth which is considered as an emergency and also severe infections that can be life threatening. Dental emergencies usually needs to be treated immediately.

Dental emergencies which we manage are:

- Unexplainable tooth ache.
- Swollen or bleeding gums.
- Swollen jaw or mouth.
- Exposed nerves.
- Knocked out tooth.
- Dental abscess.

Although high quality preventive care can help to keep some issues at bay, dental emergencies can happen. if you're dealing with a dental emergency, time is of the essence to prevent the situation from getting worse. We at Meenakshi Mission are open 24 hours to help patients with emergency needs.

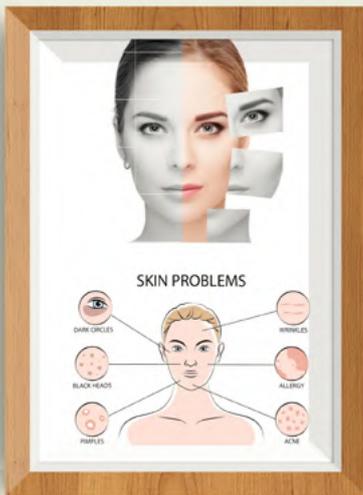
We design your smile in style

Our aim is to care for you as a person and give you a healthy, beautiful smile in comfortable surroundings. We endeavor to dispel the myth that a visit to the dentist should be an uncomfortable experience. In striving for this, we have developed a warm, welcoming facility, incorporating the latest advancements in dental technology and most importantly established a team of highly skilled, motivated and caring professionals to provide you the best dental care. It is important to us that you feel welcomed and comfortable during each visit and you go back with a smile.

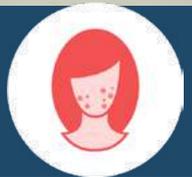
Our philosophy is simple. We try to provide quality dental care for you and your family in a happy, professional and caring environment.

Statistics

Inpatient	:	92
Outpatient	:	4426
Surgery cases	:	215
New	:	515
Review	:	3911



DERMATOLOGY, VENEREOLOGY & LEPROLOGY, COSMETOLOGY & DERMATOSURGERY



At MMHRC'S Department of Dermatology, Venereology & Leprology, Cosmetology & Dermatotomy expert care meets specialized attention. The Consultants here keep abreast of the latest developments in the field, thus making sure that internationally updated treatments are available for each and every patient who walks in.

The procedures which we do in our outpatient department are as follows:

Clinical dermatology

- Vesiculo-bullous disease like Pemphigus and Pemphigoid are treated with immunosuppressants and given wound care with various dressings.
- Papulo-squamous disorders like Psoriasis, lichen planus are diagnosed and prescribed with methotrexate, acitretin, cyclosporin, biologicals and phototherapy.
- Infectious disorders like dermatophytosis, herpes, varicella zoster, warts are countered with suitable anti-infective therapies to prevent recurrence and relapse.
- Various kinds of eczema are treated with an intention to maintain skin barrier mechanism.

- Hair loss disorders including telogen effluvium, AGA, alopecia areata are investigated to find the cause and treated with success using medical and surgical therapies.
- Pigmentary disorders like vitiligo, the progression is halted and comprehensive treatment including surgical procedures is done for re-pigmentation.
- Skin biopsy is done to confirm the disease. Latest techniques for diagnosing skin diseases like Direct Immuno-Fluorescence (DIF) is done here with accuracy.

Sexually transmitted disease like syphilis, gonorrhoea, chancroid, lymphogranuloma venereum, herpes genitalis, candidiasis are recognized and confirmed by cytology and biopsy if needed. HIV patients are referred to us from various hospitals for latest anti-retroviral therapy. PLHA patients follow-up for long term and other opportunistic infections are also diagnosed and treated.

Interventional dermatology

Department of Dermatology at MMHRC is fully equipped with minor operation theatre and melanocyte transfer lab to perform advanced

dermatosurgical procedures like hair transplantation and non-cultured epidermal cell suspension technique. The department is also equipped with lasers including diode laser, fractional carbon-dioxide laser, pico laser and micro-needling radiofrequency. The various interventional dermatological procedures performed in the department include.

Cryotherapy

Cryotherapy uses liquid nitrogen to treat warts, vascular lesions, keloids and hypertrophic scars.

Intralesional steroid injection

Intralesional steroid injection is a therapy done for conditions like keloids, hypertrophic scars, alopecia areata and hypertrophic lichen planus.

Tapwater iontophoresis

Tapwater iontophoresis is used to treat hyperhidrosis of palms and soles not responding to topical and oral medical therapy.

Autologous serum therapy

Autologous serum therapy is done for the treatment of resistant urticaria. It is performed by repeatedly injecting patient's own serum into their muscle tissue.

Phototherapy

It is a form of treatment that uses ultraviolet light (NBUBV & PUVA) to treat skin conditions like psoriasis, vitiligo, atopic dermatitis and uremic pruritus.

Fractional CO2 laser

Fractional CO2 laser resurfacing is done for Acne scars, Traumatic scars and for photoaging with reduced down time. The laser pixellates the epidermis without much damage and promotes new collagen synthesis. Warts, seborrheic keratosis, acrocordon are removed using ablative CO2 lasers using focussed mode.

Tattoo / Pigment laser

High energy pulse PICO laser is done for removing unwanted tattoo and skin hyper pigmentation like melasma, pigmented nevus, post inflammatory pigmentation and lip pigmentation.

Chemical peels

Salicylic acid, ferulic acid peels are done for acne, facial melanosis, skin rejuvenation, ageing and uneven skin tone.

Microneedling radiofrequency

Minimally invasive procedures are done for wrinkles, acne scars, striae distense and pore reduction using radiofrequency and needles. The device stimulates collagen synthesis with minimal damage to the epidermis.

PRP / PRF Therapy

Platelet rich plasma (PRP) using autologous platelet concentrate is done in the department for scars, alopecia, striae distensae. It can be combined with fractional CO₂ laser and microneedling for better results. Platelet rich plasma and platelet rich fibrin (PRF) is used for chronic non-healing ulcers with successful outcomes.

Vitiligo surgery

Both tissue grafting and cellular grafting techniques are performed in the department. Tissue grafting techniques performed include: mini-punch grafting, suction blister grafting, smash grafting and ultra-thin grafting.

Cellular grafting includes non-cultured melanocyte transfer, dermal cell suspension and non-cultured outer root sheath follicular cell suspension. These techniques are performed across very few centres in India. The department is equipped with a melanocyte transfer lab attached to the minor OT.

Nail surgery

Partial nail avulsion with chemical matrixectomy is performed for ingrown toe nail and pincer nail with least damage to the existing nail unit avoiding complete nail avulsion.

Hair transplant

Hair restoration for androgenic alopecia is done for appropriate candidates by follicular unit extraction (FUE) technique with no suture and imperceptible scarring. The technique is performed with full safety and imported equipments. FUE is also done for eyebrows, moustache and traumatic scars.



Minor dermatosurgical procedures

Mole excision, cyst excision with narrow hole extrusion technique, Ear piercing with sterile stapler technique, ear lobe repair, corn excision are a few minor dermatosurgical procedures done in the department.

Other activities

Department of Dermatology conducts camps and those patients receive concession for various procedure and lab investigations.

Conference attended

Dr. NIRMAL. B

1. Participated as faculty and delivered a talk on Dermatoscopy of pigmentary disorder in Indian skin at 12th annual IADVL-TN conference held at Chennai on September 2022.
2. Delivered a talk on Newer horizons at 20th annual conference of Association of cutaneous surgeons (I) ACSICON 2022 held at Wayand on September 2022.
3. Participated as faculty and delivered a talk on ONYCHOCON 2022 held at Visakhapatnam on December 2022.
4. Participated as faculty in workshop and delivered a talk on Dermatoscopy of Facial melanosis at DERMACON International Mumbai - 2nd International & 51st National conference of Indian association of Dermatologists held at Mumbai on February 2023.

Dr. KARPAGA PRIYA

1. Ladvl-sig dermatosurgery CME-2023, Puducherry.
2. Ladvl-sig trichology cme -2022, Madurai.
3. Stalwarts of dermatology congress workshop -2022, Bangalore.

Statistics

New cases	:	117
Review cases	:	436
Cross opinion	:	274
Total cases	:	827





DIABETOLOGY



Introduction

Our sincere efforts and hard work towards achieving world class diabetic care to everyone has made us one of leading department for diabetes management in the state. Lot of support and response from other units, hospital management and people has helped us to deliver excellent care to patients. With the blessings of everyone, we are very happy to share our achievements.

Our services

- Total diabetic care under one roof like Retinopathy, Neuropathy, Nephropathy and heart care (Cardio Vascular disease) – one among the very few centres in Tamil Nadu were a holistic treatment for diabetes is possible under a single roof. Patients with multiple co-morbidities are being treated with co-operation of various departments.
- Custom made Diabetic foot wear – patients with foot ulcers can get customized foot wear.
- Diabetes Club – diabetic patients meet once in 3 months and have multiple debates about diabetes along with doctors.
- Free insulin for Type – 1 diabetic patient – to improve the patient's adherence.
- Monthly magazine – “ Kasakkum Inippu” – to educate diabetic subjects.
- Intensive monitoring for GDM (pregnant diabetic) subjects – we provide exclusive telephone counselling once in a week to maintain a strict glycemic control.
- Tele and e-glucose monitoring (telephone, telemedicine & e-mail) – particularly during covid pandemic, patients were consulted through telemedicine.
- Diet counselling by qualified nutritionists – diet advice is reinforced during every visit.
- Patient education by using diabetes maps – mass patient education is done daily in patient waiting area in order to make them understand the nature of the disease.

Facilities

- CGMS (Continuous glucose monitoring system).
- AGP - Ambulatory glucose profile.
- Insulin pump therapy.
- Diabetic neuropathy screening : we have Bio thesiometry to detect early diabetic neuropathy



and foot pressure mapping to make customized foot wears.

- Hand Doppler for Diabetic vasculopathy screening.

Medical care

- We manage case admitted for DKA (Diabetic ketoacidosis), diabetic ulcer foots and other patients admitted with complications of diabetes (like MI, Stroke, CKD, Surgical illness etc..).
- All diabetics are treated and monitored to prevent the onset of long-standing complications like retinopathy, neuropathy and nephropathy. This includes screening for diabetic complications like fundus photographs, heart check-ups, peripheral vascular screening, tests for micro albumin, urine PCR, nerve conduction study and autonomic nerve system study.
- We do minor procedures like corn foot removal. We also have footwear outlet at our department. The patients can get footwear of their choice by customization.
- CMEs are conducted every year on recent advances in the field of diabetes for the benefit of our junior doctors and general practitioners.

Other services

- Neuropathy clinic.
- Insulin pump therapy.
- Diabetic foot care (team work).
- Diabetic dental care - around 1000 patients were screened for dental diseases and many were treated.
- Holistic diabetes health check up.

Department staff

We have qualified doctors working in our department. Our consultant is one among the few who has completed the MCI recognized diabetes course. We also have one registrar and three junior doctors who work round the clock. We are also been supported by dietician and staff nurses.

Charity

We are providing free insulin to Type 1 diabetic children up to 18 years, So far, 25 children have been benefited through this service.

World diabetes day activity

Free camp is being conducted every year to detect diabetes on November 14. About 200 - 300 patients attend every year. Public awareness speech will be given on Diabetes, cardio vascular disease and dental care in Diabetes by our doctors. Diabetic lunch will be provided for all patients who participate. Apart from this, the whole November month will be celebrated as Diabetes month.

Comprehensive diabetes health check up will be done at reduced rate during all November months. More than 500 patients will be benefited. We provide T-shirts with Diabetes theme for our staff and patients to create diabetes awareness. We also conduct drawing competition for Type 1 patients and encourage them with gift.

Research and presentation

1. E-poster presented in ATTD 2023 annual international conference held in Berlin in February 2023.
2. Case presentation done in TREND0 annual national level conference held in Madurai.
3. Awareness talks about myths and facts about insulin given in Facebook in March 2023.
4. Reviewer of articles in the journal of medicine and science (TJMS).

Statistics

New cases	:	752
Review cases	:	13559
Total cases	:	14311



DIETETICS AND CLINICAL NUTRITION



The department of nutrition and dietetics is an integral part of MMHS's healthcare system. The dietitians will direct the operations of all the kitchens and dining rooms in the hospital to provide nutritious, well prepared food providing diet service for inpatients, outpatients and staff. The dietitians also help develop providing personalized nutrition care plan according to their medical needs. Our dietitians work with diverse professionals including the consultants in providing right nutrition thereby help in the recovery and betterment of the patients. We as dietitians in this hospital help in strengthening and developing healthy eating habits and lifestyle changed to encourage good health.

Services provided at meenakshi mission

The department of dietetics provides dietary services to all departments within the hospital and also designated areas in the local community. The dietitians team up with different healthcare professionals of various departments like cardiology, cardiovascular and thoracic surgery, diabetology, Gastroenterology and GI scopy, general surgery, nephrology, paediatrics, oncology, neurology, neuroscience, obstetrics and gynecology, plastic surgery, cleft palate, urology, orthopedics, oncology to provide patients with personalized diet plan and counseling.

Food service management

- The dietitians help plan and provide nutritionally balance therapeutic meals for inpatients.
- To plan and provide enteral nutrition formula to the critically ill patients.
- To check the quality of food items supplied by the vendors.
- To supervise food preparations and distribution.
- Administrative management of kitchen, staff and equipment.
- To train kitchen staffs the importance of personal hygiene, cleanliness and sanitation, safety and secure measures to provide good quality food to the consumers.

Duties of dieticians

- To evaluate and monitor the food service system to provide nutritionally adequate quality food for the inpatients.
- To plan, organize and conduct orientation and in-service education programme for food service.
- To plan layout design and determine equipment requirements for new food service facilities.
- Recommends and monitors standards of sanitation, safety and security in food service.
- To develop menu patterns.
- To assess, develop, implement and evaluate nutritional care plan and provide follow up.
- To update the diet charts and educate the patients.

Nutrition care process

Dietitians conduct extensive nutrition screening for the inpatients by the following,

- Nutritional assessment
- Nutritional intervention
- Nutritional diagnosis
- Nutritional counseling
- Follow up and reassessment

Dietitians also educate patients for self efficient nutritional management by basic food science, preparation methods, modification of foods, etc. They also train healthcare providers like nurses and catering staffs in provision of therapeutic diet.

Type of diets provided for inpatients and outpatients

The department of dietetics work hand in hand with the diet kitchen to provide pre -inspected and tasted food for the hospitalized patients. The department offers customized diet food prepared for underlying clinical condition like diabetic, hypertension, nil alt diet, avoids vitamin- k diet and in certain cases even personal preference of the patients is considered. Every effort are taken to make the food delicious which is well accepted and appreciated by the patients and their care takers. The hospital kitchen follows de centralized system of food distribution catering to more than 300 patients in various wards.

Specialized therapeutic services

- Inborn errors of metabolism.
- Ketogenic diet.
- Neutropenic diet in liver and kidney transplant.
- Intra- operative nutrition care in bowel resection.
- Personalized diet plan is made for the OPD patients.
- Calorie counting is done and accordingly nutritional advice is given.
- Along with macro nutrients, micro nutrients are also taken care of.
- Nutritional recipes are developed according to the feasibility of the patients.

Academic activities

We provide internship programme for under graduate and post graduate dietetics interns from various colleges in Tamil Nadu and Kerala.

Guest lectures on nutrition for both under graduate and post graduate when required by the institution. We also conduct classes on the importance of nutrition for the nurses working in this hospital.

Hospital dietary services

- The department provides nutritional requirement to about 800 patients per day on an average.
- The hospital kitchen houses is the most sophisticated “state of art” equipment with an dry ration and deep freezer/cold storage facility for perishables. The 3 sink washing system the garbage clearance is promptly done at frequent intervals.

Nutritional care of patients

In-patients: The department provides normal, modified and therapeutic diets to all the in patients with treating physician of the individual patient. Dietitians take extensive ward rounds a taken, bio chemical parameters is evaluated and nutritional assessment done. Proper initial syndrome, Diet modification is done for the patients in case of some food allergies or to individual diet counseling. The patient’s compliance with the diet is evaluated and changes and detailed diet chart at the time of discharge.

OPD Clinic: Out-patients referred from various departments are given diet counseling at the OPD timings are from 9am to 5pm. personalized diet plan is made for the OPD patients. Along with macro nutrients, micro nutrients are also taken care of.

Statistics

Diet Counseling	=	83,41,151/-
Diet counseling - OP	=	48,500/-
Special room total diet	=	1,09,136
ICU total diet	=	1,09,275
Paediatric oncology diet	=	32,210
Hospice total diet	=	15,247
ANC mother total diet	=	11,755
Total MHC diet counseling	=	2,843

Dietetics Internship

Students under-graduate (UG)	=	178
Students post graduate (PG)	=	52



ENT (OTORHINOLARYNGOLOGY)



Introduction

ENT & Head & Neck surgery is a rapidly advancing department in the field of medicine. With the introduction of endoscopes, microscopes, laser and coblator, new surgical procedures are constantly being introduced and old procedures are modified with immense benefit to patients

Sub division of ENT & HNS

- Otology & Neuro otology
- Rhinology
- Laryngology
- Head & Neck surgery
- Facial plastic
- Endoscopic skull base surgery
- Paediatric ENT
- Audiology
- Sleep surgery
- Lateral skull base surgery

Surgical procedures performed in the Department of ENT & Head & Neck surgery, MMHRC

The department of ENT & Head & neck surgery offers or performs a wide range of surgical. Procedures from minor ENT procedures to advanced surgeries such as cochlear implant surgery, Endoscopic skull base surgery, surgeries for snoring and sleep apnoea and wide range of head and neck procedures including head & neck malignancies. A wide range of facial plastic surgeries such as rhinoplasty, pinnaplasty and single stage reconstruction for microtia is being done with good cosmetic results. Emergency surgical procedures for Epistaxis, stridor, neck injuries, bronchial and oesophageal foreign bodies are performed timely to avoid complications. The department also has an advanced sleep lab for patients suffering from snoring and obstructive sleep apnoea.

The department of audiology is well equipped with pure tone audiometry, impedance, BERA & OAE to diagnose all type of hearing disorders. Hearing aids area also prescribed to patients with sensorineural hearing loss.

All types are available from basic to advanced models. Swallow therapy is also given to patients with Neurological disorders

Future plan

To offer most recent innovation and the most advanced technologies in the field of ENT & HNS at an affordable cost to the needy patients. To get our hospital empanelled for cochlear implant surgery under CMCHIS

Academic performance

- Attended state ENT conference held in Kodaikanal and Maxillofacial surgical workshop in Erode.

Statistics

Ear (Otology)	:	176 cases
Nose - Rhinology	:	153 case
Endoscopic skull base surgery	:	40 cases
Facial plastic	:	28cases
Laryngology	:	177 cases
Head & neck	:	105 cases
Total number of surgeries	:	679

OP statistics

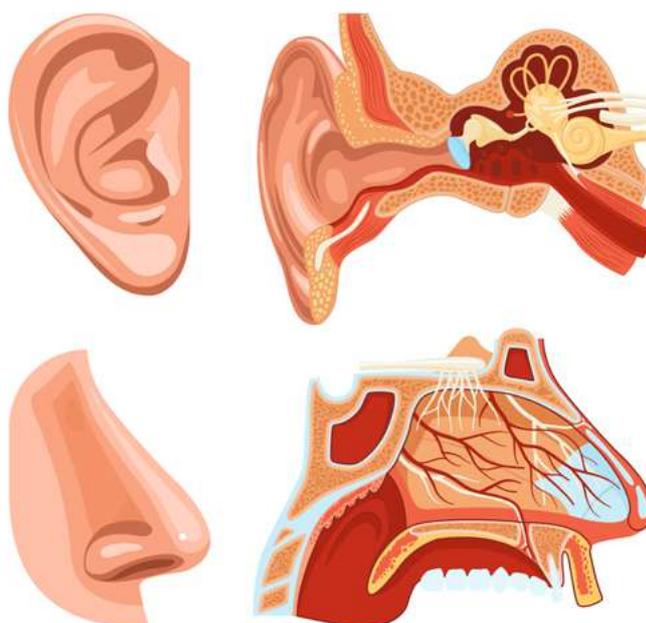
DNE	:	1257
Video Laryngoscopy	:	622
PSG	:	20
FNAC	:	50
Stroboscopy	:	30

Audiology statistics

Audiogram	:	1258
BERA	:	45
OAE	:	373
Speech Language Therapy	:	330
Hearing Aids Sold	:	15
Accessories	:	40

Statistics

In patient	:	497
New cases	:	1859
Review cases	:	5479
Cross opinion	:	2524
Total cases	:	9862





FERTILITY CARE & IVF CENTRE



Introduction

Department of Fertility Care & IVF Centre is specialized in investigating, treating and assisting infertile couples towards achieving their DREAM OF PARENTHOOD. This is made possible by a dedicated team of specialists in this field, wide range of the latest diagnostic and therapeutic equipments, offering most comprehensive and success oriented treatment. We have brought profound happiness into the lives of numerous infertile couples across our country and abroad. Our mission is to offer a combination of the best scientific and medical practices with highest level of care and consideration at affordable cost.

Every couple is an individual unit with different needs and MMHRC being a Tertiary Care Hospital, most patients present with multiple treatment failures. Hence our prime concern is to help these couples alleviate their humongous stress by elaborate and empathetic counseling, followed by carefully customizing treatment protocols, catering to the needs of every couple based on age, duration of infertility severity of the disease and emotional status.

Highlights of our department

- All investigations, treatment facilities and Expert Super speciality consultations in Comparison to other IVF Centres are available under one roof in highest standard.
- We provide maximum success rates in Intra Uterine Insemination (IUI), Intra Cytoplasmic Sperm Injection (ICSI), Egg donation programme & Fertility Enhancing Surgeries.
- We work in collaboration with a well equipped and established Andrology Department.
- With the ART (Reg) Law and Surrogacy (Reg) Law in Effect from Jan. 2022 we follow all guidelines with high ethical standards.
- The unique feature in regard to IVF and ICSI at our centre is that we do not practice IVF or ICSI in batches thus enabling the procedure to be done as and when patients come, with individualized care and less waiting period.
- We train our DNB residents in basics of infertility evaluation & management.

Services

- **Comprehensive Infertility evaluation**
- **IUI [Intra Uterine Insemination]** is done with Husband or Donor semen according to indication and willingness of couple. Donor Frozen Semen from ART banks is being used for donor cycles. Our success rates are 33%.
- **IVF – ET [In Vitro Fertilization-Embryo Transfer] and ICSI – ET [Intra - Cytoplasmic Sperm Injection-Embryo Transfer]:** These Artificial Reproductive Techniques are being offered to couples with repeated IUI failures, severe male infertility, tubal factor and endometriosis. We have an embryology lab well equipped with high quality instruments.
- **ICSI with TESA, PESA Sperm [Testicular Sperm Aspiration, Percutaneous Epididymal Sperm Aspiration]:** This is being offered for patients with obstructive azoospermia by our Andrology Department.
- **Blastocyst culture.**
- **Egg donation:** At our center, our egg donation program is strictly practiced according to ART (Reg) Law 2021 with extreme caution and transparency. Our recent success rates with egg donation (till June 2022) have been almost 60%.
- **Itruistic Surrogacy.**
- **Cryopreservation of oocyte, sperm & embryo:** We freeze the excess good quality embryos following IVF or ICSI for frozen embryo transfer at a later stage for the same patient.
- **Evaluation and treatment of recurrent miscarriage.**
- **Laparoscopic and hysteroscopic Fertility enhancing surgery:** We offer the entire range of Laparoscopic and Hysteroscopic surgeries which include Diagnostic Hystero Laparoscopy, Hysteroscopic Tubal Cannulation, Septal Resection, Polypectomy, Submucous Myomectomy and Laparoscopic Endometriotic Cyst Excision with Adhesiolysis, Polycystic Ovarian Drilling, Salpingectomy following Ectopic Pregnancy or Hydrosalpinx and Myomectomy.
- **Evaluation of Reproductive Endocrinological problems.**
- **Antenatal Care:** we offer intense antenatal care and follow-up for our pregnant patients.

We have facilities to manage various complications during pregnancy and delivery.

- **Fetal medicine:** We have facilities for fetal reduction in multiple pregnancies in association with our Fetal medicine department.
- **Preimplantation Genetic Diagnosis and Screening** is offered in Collaboration with Anderson Clinical Genetics, Chennai after Genetic counselling by our Genetic consultant.

Achievement

Applied for Registration of ART Clinic and Surrogacy Clinic under National Assisted Reproductive Technology and Surrogacy Registry.

New procedures and techniques

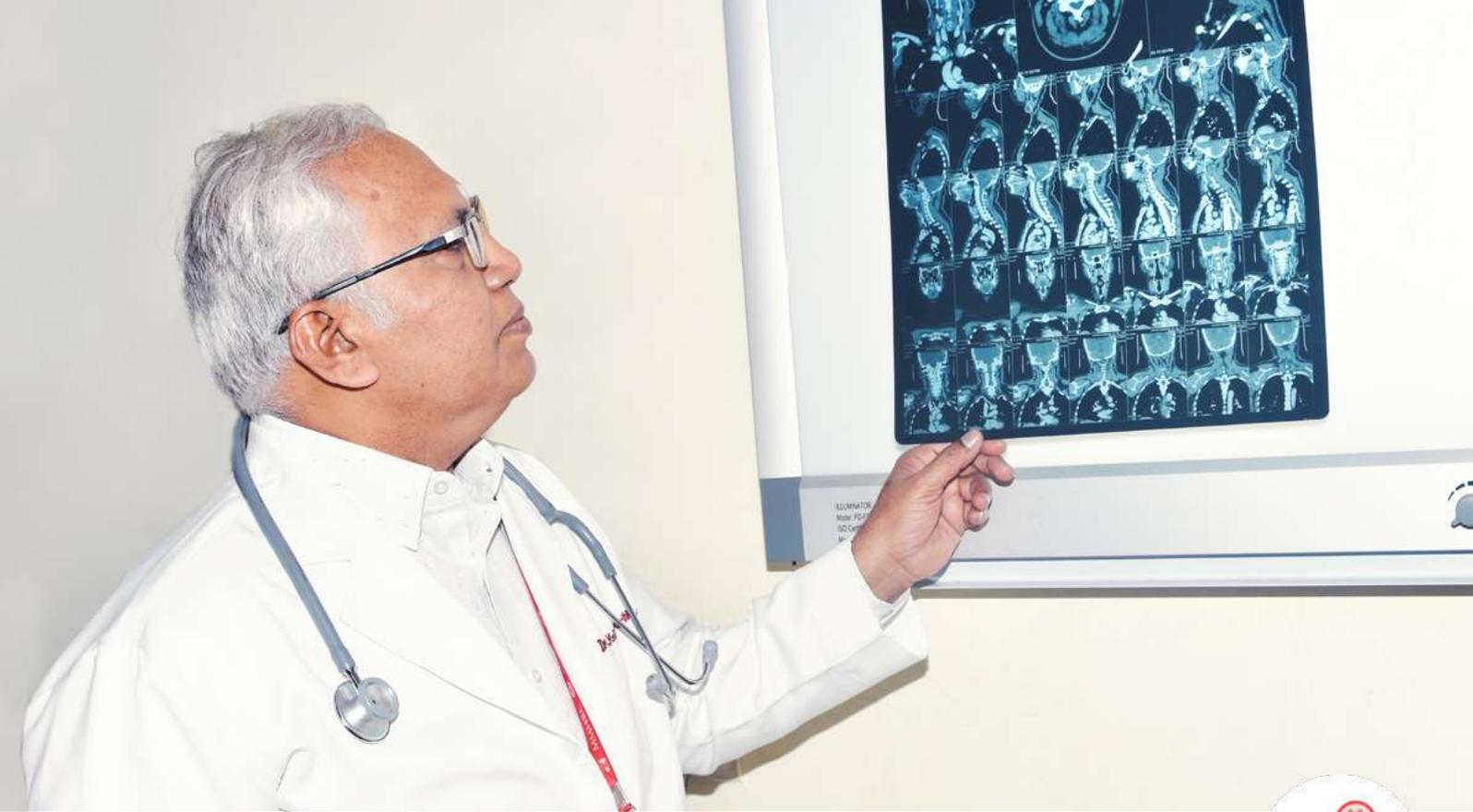
- Performing follicular fluid Hormone Analysis in ICSI cases trying to understand the association with Quality of Oocytes and Embryos and Fertilization, Cleavage & Implantation rates of embryos.
- We Collaborate with Anderson Clinical Genetics, Chennai for Preimplantation Genetic Diagnosis and Screening.
- We use Intra Uterine Platelet Rich Plasma (PRP) for thin endometrium with the help of Blood Bank.

Academic activities data

- Guiding thesis work of a Secondary DNB resident (OBG) on the topic “Follicular steroid hormones as makers of Oocyte quality, Fertilization rates, Embryo Quality, Implantation rate and Pregnancy rate”.
- DNB Residents from OG Department are posted for a month to get exposure to Infertility related Investigations, Counselling and Management.
- Every year we handle theory classes for OG Residents on Male and Female Infertility including advancements in the field.
- Clinical case Presentations on Infertility are also covered for DNB residents.

Statistics: (IP / OP / Surgeries)

New Cases	:	119
Review Cases	:	2121
IP Cases	:	121
Total Number of Cases	:	2361



GENERAL MEDICINE & FAMILY MEDICINE



Introduction

Department of General Medicine and Family Medicine in MMHRC was established almost 30 years back. Our department handles numerous cases each day both as OP & IP. We handle many challenging as well as common cases which are referred from most parts of southern Tamil Nadu. Our PG training program is well known for its academic and clinical teaching programs. Our department gives 100% Pass rates every year. Our sub - specialties under General Medicine are

1. Master Health Checkup
2. Telemedicine
3. Geriatrics
4. Adult and Travel vaccination clinic

Achievements

1. Maximum number of case presentations in the clinical society meeting for the past 6 years.
2. Many publications in Madurai Medical Journal by our post graduates across various departments, which is circulated all over Tamil Nadu.

3. We were in the frontier in managing COVID-19 pandemic successfully in our hospital.
4. Second state level AFPI conference was held during November 2022, with almost 300 plus registrations and excellent academic activities.
5. Numerous paper presentations were done by our PGS in API Madurai chapter.
6. Poster presentations were done by our PGS in APICON 2022. Most of our DNB Graduates took super specialty seats in the first attempt.

Futures plans

1. Encouraging Regular medical camps and Blood donation camps.
2. Indulging and encouraging research oriented learning and activities.
3. Promoting telemedicine
4. Awareness camps on adult and traveler's vaccination
5. Creating awareness in general health checkups.



GENETIC MEDICINE



Introduction

Genetics is a novel and rapidly growing field of medicine. The genetic disorders were previously considered rare and not worth looking for. However in a country like India with 130 crore population we are expected to see more number of genetic disorder patients than any other country in the world. The need of hour is that, we clinicians should actively look for the markers of genetic markers of genetic disease and start working up the patients accordingly.

For a range of genetic illnesses, the Department of Genetics at MMHRC offers cutting-edge evaluation, diagnosis, therapy, and counseling. A multidisciplinary team of doctors and nurses with expertise in genetics, syndrome diagnosis, metabolic illnesses, and birth abnormalities evaluates patients. To give our patients the most comprehensive and coordinated care, our staff works closely with other medical and surgical specialties.

The department works to apply the latest genetics research discoveries to patient care.

Patients and families with a range of genetic disorders and birth abnormalities can receive consultation services from the department. Additionally, it provides the urgently required diagnostic services both independently and in association with other laboratories. Genetic counseling about prenatal diagnosis and reproductive possibilities is another component of patient care.

We have rendered our services to more than 250 families over the year 2022-2023. We have given our professional support to departments like Obstetrics, Fetal medicine, Paediatrics, oncology, neurology, etc.,

Our focus of interests is, fetal anomalies, children with special needs/ congenital anomalies, familial cancers and adult/ childhood neurological disorders. We evaluate the families; fix the genetic diagnosis, offer counseling regarding management and prevention of various genetic disorders. Along with CDC in our hospital we work for the betterment of children with special needs too.

Steps of genetic evaluation, counseling and management

- Giving empathy and support to the unfortunate families.
- Attempt to confirm a Genetic diagnosis – Proper history, Evaluation, Narrowing down to probable and closer clinical diagnosis followed by genetic testing.
- Treatment – Curative/Supportive.
- Anticipatory guidance – The genetic disorder of the syndrome can have various evolving complications related to other organ systems; this can be looked for and managed early Identifying prevention strategies.
- Risk prediction for next pregnancy or for at risk family member.
- Possibility of prenatal diagnosis by chorionic villous sampling or amniocentesis or by pre-implantation genetic diagnosis.

- Follow up of the child post-natally.
- Postnatal evaluation and if needed to do tests for the newborn.
- Offering reproductive options.
- Offer solutions & support through parental support groups / governmental schemes / Charity organizations.

Future plans

- Regular classes for OG and Paediatric post graduates.
- Compilation of genetic patient details and publish it in indexed journals and Syndrome Management.

We are specialized in Orthodontic treatment, Oral Cancer Diagnosis and Management, Tooth Splinting, Intentional tooth re-implantation, full mouth rehabilitation and Syndrome Management.





HEMATOLOGY & BONE MARROW TRANSPLANTATION



The Department of Haematology and Bone Marrow Transplantation, the first of its kind in Southern Tamil Nadu, caters to patients with diseases of the blood. We have state-of-the-art infrastructure necessary for bone marrow transplantation.

Bone Marrow Transplant Ward

An 18 bedded HEPA filtered transplant unit, 24 hour regional blood bank, 3 state of the art apheresis machines (COBE Spectra and Fresenius Kabil) facility to irradiate blood products and deep freezers to store cryopreserved stem cells. We are the first to perform Allogenic haematopoietic stem cell transplants in southern Tamil Nadu.

We have done 400 Bone marrow transplantation so far for various conditions like Acute myeloid leukaemia, Acute Lymphoblastic leukaemia, Relapsed lymphoma, Multiple myeloma and Aplastic anaemia

Haploidentical BMT

For doing allogenic bone marrow transplantation we should have a HLA identical donor. Only 40% of patients needing a bone marrow transplantation will have a fully HLA matched donor. If full HLA matched donor is not available half HLA matched donor (Parents, siblings or children) can be an option.

Haploidentical (Half matched) bone marrow transplantation is a complicated procedure and we are the first in southern Tamil Nadu to do such procedures.

Benign disorders

We treat complicated benign disorders including refractory ITP, Auto immune Hemolytic anemia, etc.

We are the first hospital in southern Tamil Nadu to treat emergencies like thrombocytopenic purpura (TTP) with plasmapheresis.

State-of-the-art coagulation lab

We are proud of the fact that we are the first hospital in Southern Tamil Nadu to have a state of the art coagulation laboratory which can do comprehensive coagulation factor assays. We can also do surgeries for Hemophiliacs as we have the facilities to monitor factor levels. Various bleeding disorders managed include Hemophilia, Von Willebrand Disease, Factor VII deficiency, Factor V deficiency, platelet function disorders like Bernard Solier syndrome and Glanzmann Thrombasthenia.

Dedicated oncology ward:

We have a dedicated oncology ward, which caters to the Acute leukemias and Lymphomas. The nurses are trained to handle central venous catheters and peripherally inserted central venous catheters (PICC) with sterile precautions.

We also have the opportunity to keep the severely neutropenic patients in the HEPA filtered unit, so that the chance of acquiring invasive fungal infections are minimized.

Statistics

Outpatients: 10442, New: 942, Review: 8480
Cross: 1020, Inpatients: 1016.



IMAGING AND INTERVENTIONAL RADIOLOGY



Our department provides round the clock state of the art diagnostic and interventional radiology services to all outpatients and inpatients. Beginning with just a 300mA machine and a portable black and white ultrasound in 1990; the department has grown extensively with addition of various new diagnostic and interventional modalities over the past 33 years.

The department is equipped with a 128 slice Computed Tomography (CT) scanner machine which can perform Coronary Angiography, Digital subtraction angiography of brain vessels and whole body angiography apart from all routine CT studies. CT Brain perfusion study is done to evaluate the extent of brain involvement in cerebral stroke.

CT guided Robotic assisted percutaneous needle positioning facility is available which helps in precise biopsies of subcentimeteric lesions with about 95% accuracy and also needle placement for ablation of tumour. Magnetic Resonance (MR) Imaging studies like cardiac MR, Tractography and routine MR studies are performed to help the clinician arrive at an accurate diagnosis. High end ultra sound machines help us to perform abdominal, colour

doppler and small parts sonography with high precision. All USG guided interventional procedures are also being performed routinely.

We routinely perform diagnostic and therapeutic endoscopic ultrasound guided procedures.

We have a high end Cath Lap equipped with 3D rotational angio and DYNA CT facility, enabling intervention in any body parts including neuro interventions.

The stroke interventional unit offers intraarterial thrombolysis, endovascular thrombosuction and clot retrieval treatment for patients presenting with acute stroke.

We have an advanced fetal imaging and interventional unit which routinely performs fetal anomaly scan, fetal echocardiography and fetal interventional procedures like amniocentesis, chorionic villous sampling, fetal cord blood sampling, fetal blood transfusion, fetal ascitic and effusion tapping, fetal cephalocentesis and selective fetal reduction.

We are in the process of installing the following high end latest state of the art equipments.

1. 3 Tesla MRI with latest software applications.
2. Vaccum assisted breast biopsy unit which will aid to remove breast tumor less than 4 cms using a small needle thereby avoiding surgery and surgical scar on the breast.
3. Digital 3D mammography machine with tomography and stereotactic biopsy facility.
4. Dynamic Digital Radiography equipment.
5. Addition of AI (Artificial Intelligence) applications to our diagnostic equipments is also being considered which will help us to give more accurate and faster diagnosis. AI assisted Multi Slice CT & advanced application.

Faculty

We are equipped with exquisite and experienced faculty, technicians and staff personnel. Dr. T. Mukuntharajan., DMRD., Senior consultant and Head of the Department is one of the most experienced faculties with over 30 years of excellence in diagnostic and Interventional radiology. Our esteemed team includes Dr. N. Karunakaran., DMRD., DNB., Senior consultant, Dr. Ganesh Rajagopal., DMRD., DNB., FRCR., Senior consultant, Dr. Nancy Manodoss., MD., Senior consultant, Dr. M. Soundara Pandian., MD., Associate consultant.

Statistics

- This year over 75,000 radiographs, 35,000 ultrasonograms, 16,000 CTs.
- 4500 MRIs and 1500 interventional procedures were performed by our department.

Diagnostic

1. Routine Radiography	- 74,788
2. Contrast radiographic studies, like IVU and Barium studies	- 189
3. Mammogram	- 817
4. Dexa scan	- 36
5. Routine ultrasound and colour doppler	- 34,930
6. Routine CTs	- 16,396
7. CT- Angiogram	- 555
8. Coronary Angiogram	- 17
9. Routine MRI	- 4,661

Interventional

1. CT Guided procedures	- 134
2. EUS guided procedures	- 50

3. USG guided drainage procedures / FNAC / Biopsy	- 1,165
4. Feta / Vascular / Biliary interventions	- 204

Academics and achievements

There has been a steady growth in our academic arena with about 70 diploma in national board radiology residents till date. We conduct regular academic sessions with intra and interdepartmental case discussions.

Our residents have participated in paper presentations, poster exhibits and quiz's in various conferences. We have also published case reports in

1. Case reports in clinical radiology on the title "Endovascular embolization of idiopathic renal arteriovenous fistula - A case report and literature review".
2. Indian journal of radiology and imaging on the title "Renal coloboma syndrome" - An autosomal dominant genetic disorder".

Some of the conferences attended include.

Dr. T. Mukuntharajan

Chair person : Annual conference of Indian society of Vascular and Interventional Radiology - Hyderabad - 2023.

Dr. Ganesh Rajagopal

Quiz master - Platinum jubilee celebrations of TNPY IRIA 15- 18 DEC 2022, Chennai.

Dr. Nancy Manodoss

One of the teaching faculty in Indian college of Radiology and Imaging (ICRI) online teaching program. She presented few topics last year including Doppler evaluation of carotids, Fetus less than 10 weeks, early pregnancy failure.

Dr. Madhumitha & Dr. S. Vignesh

The 20th Asian oceanian Congress of Radiology in conjunction with the 78th Annual Meeting of the Korean Society of Radiology Conference, Seoul, South Korea - September 20 - 24, 2022.

Dr. Karan, Dr. Madhumitha & Dr. Buhari

Platinum Jubilee celebration of TNPY IRIA - 75th Annual conference of TNPY IRIA & 3rd Annual conference of ISHNR 16 - 18 Dec. 2022.

Conducted the IRIA TN & PY Madurai sub-chapter CME meet- March 2023.



INSTITUTIONAL ETHICS COMMITTEE FOR HUMAN RESEARCH



An ethics committee is a body responsible for ensuring that medical experimentation and human subject research are carried out in an ethical manner in accordance with national and international law.

Institutional Ethics Committee at MMHRC is one of the most experienced with the review history of more than 100+ clinical trials and academic studies.

Being noted as one of the experienced Ethics Committees in South India, we are proud that we are maintaining the creditability of Research.

Institutional Ethics Committee MMRC is playing a vital role in the development of research activities at MMHRC.

Due to experience of review in diverse therapeutic areas experience and in continuous monitoring of research activities, the research activities in the institution are growing with tremendous phase.

Objective

- To maintain the rights and wellbeing of participants involved in Human Research.
- Quality and harmonization in research activities as suggested by ICMR & DCGI.

Role

- IEC will review and approve all types of research proposals involving human participants with a view to safeguard the dignity, rights, safety and well being of all research participants.
- The IEC will take care that all the cardinal principals of research ethics viz: autonomy, beneficence, non-maleficence and justice are taken care of in planning, conduct and reporting of the proposed research.
- IEC will look into the aspects of informed consent process, risk benefit ratio, distribution of burden, benefit of the research participants and provisions for appropriate compensations wherever applicable.
- The research proposals will review before start of the study as well as monitor the research throughout the study until and after completion of the study through appropriate well documented procedure for example annual reports, final clinical study report and site visit etc.,
- The committee will also examine compliance with all regulatory requirements, applicable guidelines and laws.

Composition of IEC

S.No.	Name of the IEC Member	Role at MMHRC-IEC
1.	Dr. G. Kumaresan	Chairperson (Outside the Institution)
2.	Dr. Ramesh Ardhani	Member Secretary
3.	Dr. M. Malathi	Pharmacologist (Basic Medical Scientist) (Outside the Institution)
4.	Dr. Jayesh Prabhakar Warade	Basic Medical Scientist
5.	Dr. P.N. Rajasekaran	Clinician (Outside the Institution)
6.	Dr. P. Krishnamoorthy	Clinician
7.	Dr. S. Senthil Kumar	Clinician
8.	Mr. M. Panneer Selvam	Legal Expert (Outside the Institution)
9.	Dr. P.S. Srinivasan	Legal Expert (Outside the Institution)
10.	Mrs. R. Amuthaselvi	Lay person (Outside the Institution)
11.	Mrs. M. Yasmine	Lay Person (Outside the Institution)
12.	Dr. M. Kannan	Social Scientist (Outside the Institution)
13.	Mrs. Sharmila Siraj	Social Scientist (Outside the Institution)

Data and Safety Monitoring Committee (DSMC)

DSMC is a independent multi disciplinary group, looking after safety and efficacy consideration. MMHRC's DSMC consists of 3 members team namely Dr. S. Kumar, Cardiac Anesthetist, Dr. B. Jeya Priya, Pharmacologist and P.Sundarraaj Social Scientist. Once in a 3 month committee will monitor and evaluate the clinical research activities and verify the incidence of events, study design, the effectiveness of the intervention recruitment procedure and compensation etc.

Accomplishment

MMHRC-IEC has Re-registered in Department of Health Research which is essential for academic studies, the DHR Reg. No. EC/NEW/INST/2020/1150 (under Process).

Numbers and list of researches reviewed and carried out during the year Apr 2022 – Mar 2023.		
List of Reviewed Clinical Studies in MMHRC-IEC		
Department	Name of Doctor	Protocol No.
Radiation Oncology	Dr. K.S. Kirushna Kumar	HCR/III/DENOSOL/12/20/19
		AZBE122005
Medical Oncology	Dr. Krishna Kumar Rathnam	D926NC00001
		NAT2694P2
		PERT.21.001
Surgical Oncology	Dr. R. Vijayabhaskar	SYNCD-016-22
Nephrology	Dr. K. Sampath Kumar	TPC_CKD_007
		D9488C00001
Cardiology	Dr. S. Selvamani	SP/CVD/Metosartan/PIV-0 1-2022
Diabetology	Dr. C.R. Mahesh Babu	WOC/WOS/CT-37/14
		ALK27-DAL1
Anesthesiology	Dr. N. Maharajan	21PR0067-008
Pulmonology	Dr. G. Velkumar	208657
No. of Academic/ Investigator Initiated/ Case Report Reviewed for Publication Reviewed - 14.		
No. of Amendments of Clinical Studies Reviewed - 17.		
No. of DNB Research Thesis Reviewed - 70.		



LABORATORY SERVICES



MMHRC's Laboratory has pioneered laboratory accreditation in South Tamil Nadu among Multi Speciality hospitals. It is the first, hospital attached, NABL accredited lab (MC 3364) in South Tamil Nadu. Our Laboratory is equipped with cutting edge equipment to deliver the best possible services to the society and clinicians.

Yet, the approach is patient – centric. We have a team of well qualified and experienced laboratory professionals who follow good laboratory practices in accordance with ISO 15189:2012 guidelines.

Quality Policy

“To provide quality laboratory services to our customers, through internationally approved methodologies, in an ethical manner, as a team of skilled professionals.”

The Management complies with ISO 15189:2012 medical laboratories – These are particular requirements for quality and competence and are on par with international standards.

We also ensure compliance with NABL and regulatory requirements.

We ensure that our team familiarizes itself with quality documentation and implementation of international standards at all times.

Bio Chemistry

The Bio-Chemistry Department has Unicel DxC 700 AU A , DXI 600 A, CHEM 7, Agilent CARRY 630 which is an IT Integrated modular auto analyzer. It performs both clinical chemistry and Immuno chemistry parameters (CLIA method). We conduct 1640 tests/hour. This instrument is a well equipped method (Closed Tube System) built chiefly to avoid bio hazard exposure to the operators. We have two backup instruments for DxC AU 700 (Clinical Biochemistry) and DXI 600 (Immuno chemistry). We have Sebia Minicap Capillary Fully Automated Electrophoresis System for Hb Electrophoresis and protein electrophoresis

The Bio – TOSOH G8 & TOSOH GX Analyzer is used for HBA1C Test by HPLC (High Performance Liquid Chromatography) method. Periodic maintenance and calibration is done as per manufacturer guidelines. One Full time Consultant (MD Biochemistry) is authorized to monitor and file the reports.

Haematology

The Haematology department has DxH800-1 and DxH800-2 cell counters with IT integration. This instrument is equipped with advanced electrical impedance with VCS (Volume Conductivity Scattered) technology, and with histogram for RBC, WBC and Platelet. The department also consists of the Alifax Roller 20 LC which is dedicated to analyze Erythrocyte Sedimentation Rate (ESR).

The ACL TOP 300 & ACL Elite pro coagulometer is used to test PT, APTT, Fibrinogen, FDP, Factor V, Factor VIII, Factor IX, Factor XIII, Fibrinogen and D-Dimer. This equipment is based on Nephelometric principle. In clinical pathology, we have 2 urine analyzers (clinitek advantus & clinitek status) which analyze urine investigations. Four Full time pathologist is authorized to file the reports.

Flowcytometry

The Flowcytometry department has BD FACS Cantoll 8 color cell analyzer. This instrument features a fixed alignment flow cell in the fluidics system that minimizes startup time and improves producibility. To increase sensitivity and resolution for each color in a multicolor assay a patented optical design maximizes signal detection. The basic principle of flowcytometry is the passage of cells in single cell in front of laser so that they can be detected counted and sorted. Cell components are fluorescently labelled with antibodies binding to cell surface (Immunophenotyping), cytoplasm or nuclear antigen and then excited by the laser to emit light at varying wavelengths.

Microbiology

The Microbiology department has FDA approved Automated Continuous monitoring BactecFX culture system for accurate and fast recovering pathogens with detection in the first 24hrs. Microbiology has Vitek compact 2- automated culture system. Bactec™ MGIT system is a liquid culture technology used for complete TB diagnoses including pulmonary and extra pulmonary TB.

Serology

The serology department performs investigations on infectious disease and auto immune markers analyzed by CLIA - Chemiluminescence method using Vitros5600 & ECiQ Equipment, Immage 800 (Nephelometry), ELISA, Immuno Chromatography technique and western blotting techniques.

Histopathology

The Pathology Department deals with processing and reporting of biopsy samples (small and large), FNAC, Fluid Cytology and cervical Pap smears. Reporting of bone marrow aspirate, Peripheral smear, LE cells test are done by Four regular pathologists round the clock. We also perform frozen sections for difficult intra operative cases. 78 Immuno histochemistry markers are being done for solving problematic cases related to oncopathology cases. We perform Nephropathology (Native & Transplant Renal Biopsy, Skin biopsy LM+IF), Skin DIF. The Histopathology Laboratory has Automated Tissue Processor (ASP 300 S & Sakura), Apzem Grossing station, Yarco Embedding station, Cryostat Frozen section (CM1520), Microtome (RM2125,RT,RTS), Automated staining system (i6000), Hettich Centrifuge (BD SurePath) & Medspin (Cytocentrifuge).

Molecular Genetics

The molecular biology department performs investigations on various infectious disease by using state-of-the-art real time PCR technology. The molecular biology laboratory is equipped with machines like Gene Xpert DX IV, Cepheid; Roche MagNA Pure 24 Nucleic Acid Extraction System, Light Cyclor 480 II and TRUOLAB Quattro, Molbio.

Highlights /Achievements

1. Our laboratory services are the first NABL accredited lab services in South Tamil Nadu among the multi speciality hospitals. We received accreditation in 29/11/2011 and renewed on 28/04/2022 and valid up to 27/04/2024.



LABTECH 2022 - Conference on "Recent Advances in Medical Laboratory".

2. The largest laboratory with highest number of NABL accredited test.
3. The laboratory services organized a national conclave in clinical laboratory management on the 8th and 9th of October 2022. It was followed by a workshop on NABL standards. It received participation from delegates from all over south India.
4. For the year 2022 our laboratory got award of Best Diagnostic centre in south Tamil Nadu.

Academic activities

1. We conduct theory classes and practical training for students of B.Sc Medical Laboratory Technology and Applied microbiology for our Meenakshi Mission Hospital College.
2. We provide guidance to trainees from other institutions, guide degree students in their project works and provide guidance to students doing hospital administration.
3. We provide Post- qualification practical training for DMLT, BSc and MSc Biochemistry and Microbiology students from private collages and institution in and around Madurai.
4. We train nursing college students in phlebotomy and other collection procedures.
5. We assist MD pathology and MD Biochemistry Post graduate students from different Medical colleges in south Tamil Nadu, by performing rare Laboratory tests as a part of their dissertation work.



Statistics	
Labs - Work load	Apr-2022-Mar-2023
Haematology	966677
Clinical pathology	711080
Flow cytometry	600
Routine chemistry	1322856
Special chemistry	189055
Microbiology	52402
Infectious Disease Serology	102165
Immuno Serology	15220
Molecular biology	3660
Histopathology	22327
Cytopathology	5356
Nephropathology	831
Total	3392229

Future plans

1. To move on to ISO 15189:2012 guidelines from ISO 15189:2022.
2. Within Year plan to develop South Tamil Nadu reference laboratory and Specialized transplant immunology laboratory.
3. To apply principle of Lean Management for better and cost effective delivery of services.
4. To act as referral unit for Anatomic pathology (Oncopathology.IHC, Frozen).
5. To plant to reduce the TAT Through Pneumatic sample transportation system in the coming year.



LIONS-MMHRC HOSPICE CENTRE



Expert care at end of life: care for those with a serious illness.

As we ended 22 -23 trying to reduce pandemic precautions, we reflected on all we have learned and continue to be very proud to lead this amazing group of individuals who make every moment count, every day!

Our growth through the year has been very rewarding; we are bringing our hospice care to more patients who desire comfort care and support as they near the end of their life, and our palliative care program has tripled in size since we launched. We care for these patients at our centre, located inside MMHRC's campus, and also provide home visits within a limited service area.

It is such a privilege to share in this journey with the families we serve. Our management, staff and volunteers have proven to be dedicated, strong, resilient and agile and all of us at our hospice centre stand ready to continue caring for families in the communities we serve for many years to come.

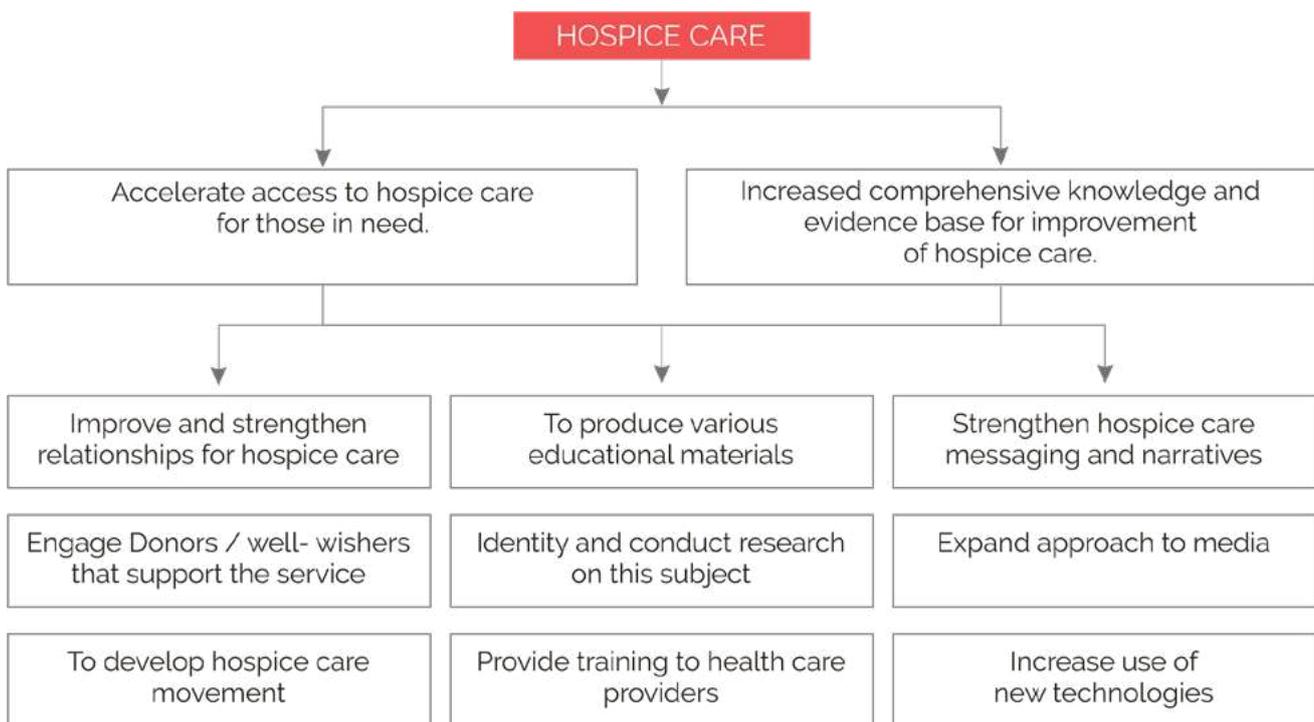
Thank you for your trust and support as we fulfill our mission with a renewed and very positive intention.

Activities overview

Goal: To create therapeutic community from health related suffering.

Output: Increased access to hospice care, educated and trained health care workforce for hospice care delivery, evidence based decision making in hospice care, positive stories and focused messaging to support and advance the world hospice care movement.





“We are grateful for the privilege of making every moment count for patients and families in the communities we serve!





MEDICAL ONCOLOGY



Every Life is Worth Fighting for

Multidisciplinary management of cancer involves integration of multiple modalities of treatment including surgery, radiotherapy, chemotherapy, endocrine manipulation and immunotherapy. The application of this multimodal approach has improved survival rates among cancer patients over the past few decades, leading to “Cure” of many cancers. To say it broadly, a Medical Oncologist’s role may be curative or palliative.

Facilities

Our unit is one of the reputed and leading tertiary care of cancer department. Since 1990, we have been rendering massive advancements in the field of cancer treatment at our unit. The unit of Medical Oncology is committed in improving the diagnosis and treatment of patients with cancer. To meet this mission there is a broad range of clinical research, patient care and counselling. We treat all cases of haematological malignancies including stem cell transplant; as well as give chemotherapy for majority of solid tumour in the various settings as mentioned above.

- OP Clinic & OP procedures
- Daycare (General and Special) – All chemotherapy drugs are reconstituted in a laminar flow to minimize the contamination and maintain the aseptic condition. Convenient and Cost-effective. No admission is required. The patient can finish the treatment in a few hours and get back home on the same day
- IP (General and Special).

- Intensive Care Unit.
- Bone Marrow Transplant Unit (Dedicated Hepa filtered unit) including Apheresis support in In-house Blood Bank.
- Follow up Clinic / Genetic Counselling.
- Psycho-Oncology Counselling.
- DNB Medical Oncology postgraduate course.

Multi-disciplinary tumour board

Our Tumour Board comprises experts in various specialties like Medical Oncology, Surgical Oncology, Radiation Oncology, Pathology, Radiology, and Nuclear Medicine Specialist. Through elaborate discussions and reviewing of the latest guidelines and recommendations; we formulate the entire treatment plan for each patient.

Outpatient services

The unit runs outpatient clinic services with readily available appointments all 6 days of a working week. We had 14117 patients as outpatient service since April 2022 (of which 516 were new cases) to March 2023.

Inpatient services

At a time, around 100 patients are admitted on a weekly basis for a diagnostic evaluation, chemotherapy and management of complications and palliative supportive care. All patients receive standard chemotherapy regimens as per global and institutional protocols, after tumour board directed treatment decisions. Newer molecules like Immunotherapy drugs (Eg: Pembrolizumab,

Atezolizumab, Durvalumab, Nivolumab), monoclonal antibodies (Eg: Rituximab, Cetuximab, Bevacizumab) and targeted therapy drugs (Pazopanib, Imatinib, Lenvatinib, Cabozantinib) are being used in treatment of various cancers. We had 3020 inpatient admission since April 2022 to March 2023.

Day-care chemotherapy services

As the hospital caters to most of the people within & about 300km radius, most patients with single day chemotherapy benefit from our day care chemotherapy services, where the patient walks in, into the unit in the morning, gets his / her chemotherapy delivered and walks out by evening. Our unit runs a 12 bedded ordinary day care / 5 special day care rooms manned by staff fully trained in chemotherapy administration and medical officers trained in medical oncology. The unit has so far administered about 3600 cycles of chemotherapy as day care since April 2022 to March 2023.

Minor procedures

At the unit, we do most minor procedures such as bone marrow aspiration / biopsy, ascitic tapping, pleural tapping, CSF analysis / intrathecal chemotherapy, Central-line & PICC line insertion under full aseptic precautions. We perform 140-160 minor procedures every month.

Bone Marrow Transplant services

Our hospital has installed new apheresis machine for stem cell collection. Our unit has started Bone marrow transplant for malignancies like NHL, HL, and Multiple Myeloma & AML. We are happy to inform that 18 patients have completed successful autologous stem cell therapy and 3 patients completed successful Allogenic transplant.

Clinical trials

Whenever there is an Ethically Approved Clinical Trial option available for any particular cancer patient; we try to enroll under the relevant clinical trial after counselling. This helps maximize the survival of these patients and gives access to high-end medicines to deserving patients. We conduct Phase 1 to Phase 4 Clinical Trials; including Bio-equivalence and Bio similar studies. These also contribute to the development of Scientific Research; which is the need of the hour for further improving the survival of cancer patients.

Postgraduate course

We have 2 DrNB Medical Oncology seats approved per year under NBE. We conduct regular academic sessions including Seminars, Journal Clubs, Clinico-Radiological meetings, Clinico-Pathological meetings and Medical Oncology Forum discussions. We have collected data on our experience with treating patients and published papers in various national / international journals or presented as Poster / Oral presentation in various meetings. Our students have participated and won in various Quiz competitions at National level.

Government schemes

We utilize CMCHIS as well as PM Relief Fund when the patient is in need of financial support and also through various other state and national insurance schemes.

Survivors meet

We conduct regular Survivors Meet for Cancer Warriors and Survivors to help patients cope and to motivate them to lead normal lives. Their families are also educated on Cancer to make them aware of the importance of Early Detection and Early Treatment.

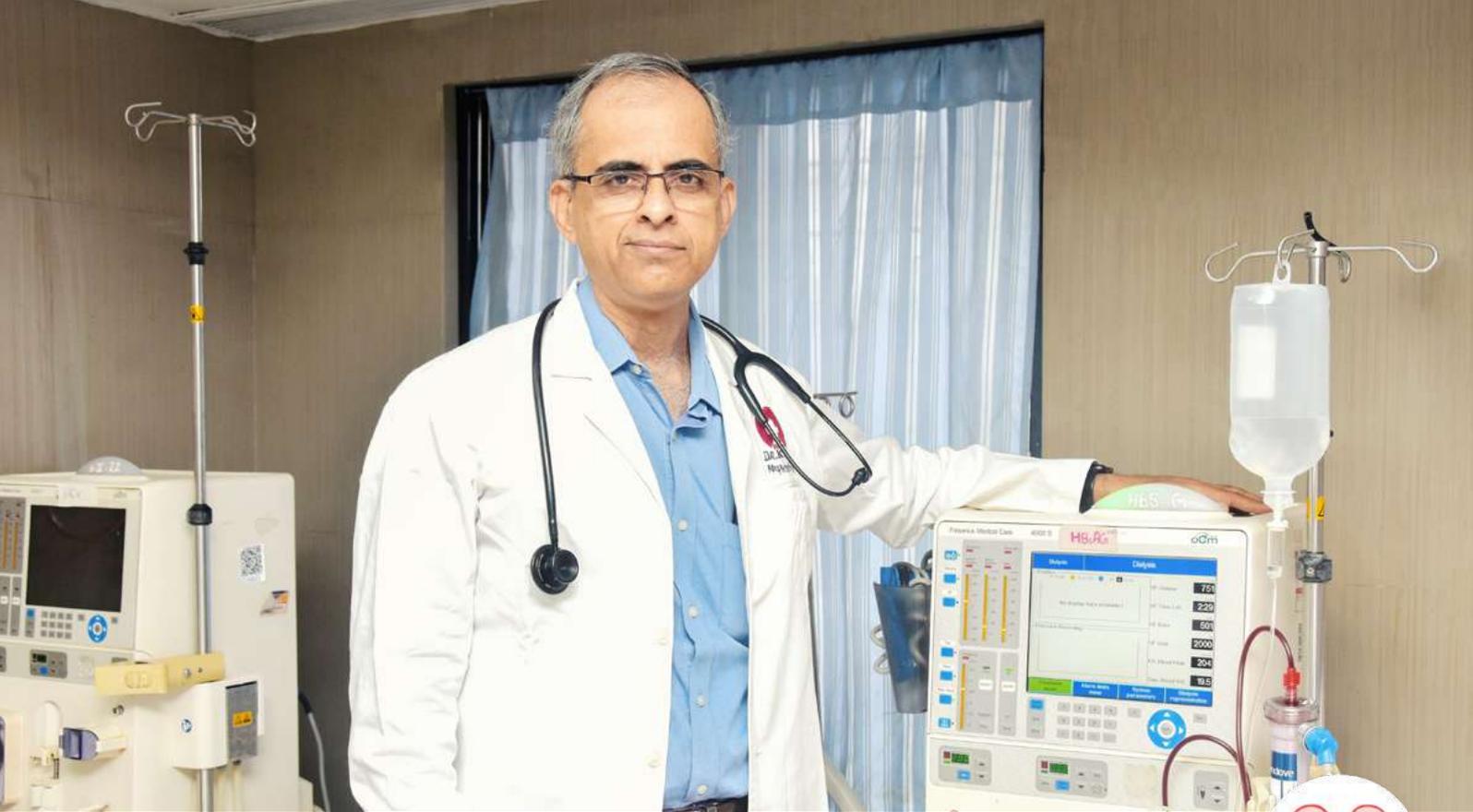
With the goal of helping poor patients who are affected by potentially curable malignancies; Our chairman have inaugurated "Meenakshi Hope Cancer Fund". Many of the Non - Profit organisations, NGOs and Well wishers have been helping with the fund; which is helping a vast majority of financially disabled patients.

Hospice Care

Managing terminally ill patients to maintain Quality of Life; Keeping them devoid of painful symptoms and giving Nutritional support is also an important part of cancer treatment. We have our Hospice centre with trained staff and Social workers; Who deal with these patients as per our Institutional protocol and guidelines; for both medical management and counselling services. Our "Pain Clinic" department utilises Interventional procedures for refractory pain management.

Statistics (Apr. 2022 - Mar. 2023):

OP New Registration - 516, OP Review Registration - 13601, IP Admission & Discharge - 3020/2990, Day care chemotherapy - 3600, OP Procedures - 1405.



NEPHROLOGY



Introduction

Department of Nephrology is one of the Flagship units of the Hospital which has consistently delivered outstanding Renal Services over the last three decades with many Firsts and Accolades to its Credit.

The Hemodialysis unit has 38 Hemodialysis stations with Machines for Inpatient and Outpatient maintenance dialysis. Two CRRT Machines which deliver highly Personalized Precision Dialysis at the Bedside in the ICU for critically ill patients with Multi Organ failure are available. Hemodialysis Machine for Sustained Low Efficiency Dialysis and HemoDiafiltration is newly installed which provides advanced levels of Hemodialysis for patients with hypotension and Uremic Cachexia and Neuropathy.

When the Pandemic Covid -19 Struck Madurai, the department rose to the challenge and provided the highest number of round the clock Dialysis services for those who were afflicted with covid associated acute kidney injury. In addition the maintenance hemodialysis was a life saver for the largest number of outpatient and Inpatients in the southern districts of Tamil Nadu.

Kidney Transplant surgery was briefly interrupted during the Pandemic. It was followed by a rebound with more number of live related and Deceased Donor Surgeries. ABO Incompatible Renal Transplants have been carried out with excellent Results. Paediatric Transplants have been carried out and one of the Paediatric Recipients received the Kidney from his Grandmother.

In the year 2023 “The Meenakshi kidney fund”, which is intended for those with financial difficulties who need dialysis and advanced treatment for renal disorders, was launched by MMHRC Chairman Dr. S. Gurushankar.

Department activities

DrNB in Nephrology

The Department of Nephrology is one of the Premier Academic Units of the Country and Super Speciality DrNB in Nephrology was started in the Year 2006. More than 15 Nephrology Post Graduates have Successfully Passed the Exams and are Practicing Nephrology all over the Country.

Our Centre has been bestowed with the Responsibility and Recognition as DNB Nephrology Exam Centre for conducting DrNB Practical and Viva for the year 2022.

Interventional Nephrology

The department is recognized by the Asia Pacific Society of Dialysis Access (APSDA) and International.

Society of Nephrology for Pioneering this Specialized Subspecialty of Nephrology. It is a matter of Pride that Dr. Sampathkumar, our senior consultant Nephrologist was nominated as the President – Elect for the Prestigious Asia Pacific Society of Vascular Access. The Society is represented by more than 20 countries in the Asia Pacific Region.

Remote Monitoring of Automated Peritoneal Dialysis

During the Pandemic Home Dialysis in the form of Peritoneal Dialysis received a lot of Focus and the Department initiated a World Class Homechoice Claria Services which is a Cloud Based home dialysis monitoring system. The patient level parameters are received on an hour to hour basis for prompt intervention with this cutting edge technology.

Conferences and workshop

1. Dr. K. Sampath Kumar was the chairperson for the Indian society of Nephrology conference which was conducted at Pune in November 2022.



2. Successful Paediatric Kidney transplant was done in 2022.



3. Golden Aim Award for Excellence was given at April 2022.



4. Dr. K. Sampath Kumar was the organizing chairman for Asia Pacific society of dialysis access which was conducted on August 2022.





NEUROLOGY



Introduction

The department of Neurology is managed by two full time consultants / post MD / DNB Registrar & 6 medical officers. Our department boasts a wide variety of Neurological disorders ranging from stroke, headache to rare infective / immune mediated neurological disorder like multiple sclerosis, polyneuropathy primary / secondary demyelinating disorders. We provide the latest treatment opinions for the same including state of the art plasmapheresis, immuno globulin & monoclonal antibodies for complete & optimal recovery.

The department includes a state of the art ICU, Electrophysiology, outpatient services & a Neurology ward. The Neuro ICU & ward are well managed by highly trained round the clock nursing professional who are capable of managing difficult neurological emergencies. The electrophysiology lab includes both traditional & bedside EEG & NCS machines with which we do a minimum of 300-500 NCS, RNS, EP, EEG studies / week. We also have video EEG for pre surgical workup of drug resistant epilepsy. We also make use of the PET CT from department of

Nuclear medicine regularly for evaluation & management of various Neurological disorder like Autoimmune / Paraneoplastic disorder, Dementia & Epilepsy.

The electrophysiology lab has well trained Electrophysiologists who are capable of performing variety of electrophysiological studies in a well organized & prompt manner.

Ours is a very few centres where nerve biopsy is done to diagnose rare neuropathy cases. We diagnosed a case of Wegener's granulomatosis by nerve biopsy in a case of mononeuritis multiplex. Our department is one of the leader in acute stroke management including intravenous thrombolysis & mechanical thrombectomy with the door to needle time of 1-2 hrs.

We also have a neurorehabilitation ward where the stroke patient and patient's attenders have good team support of highly trained physiotherapists, staff nurses and various physiotherapy equipments and dedicated plans for therapy. Importance is given for gait, power improvement. We also have an occupational therapy, where the patient gets the latest techniques of hand movement exercises.



For the prevention of stroke, we also conduct regular stroke awareness programmes. For this we reach out to the public with well known personalities and discuss in detail about the various preventive strategies like diet modification, exercises and latest treatment available in our hospital. We stress the importance of arrival by golden period (i.e) by 8 hours. We also have a good support with allied departments, like radiology and neurosurgery. We also have regular discussion for tough and rare cases, which need more care and therapeutic options.

We are also using digital platform for immediate diagnosis (i.e) PACS system, where the patients scan, X-ray are seen from the desktops of our various wards. For lesion related epilepsy, we have proceeded with lesionectomy in few cases. For a case we have done radiation induced ablation (Venous Malformation).

In the future our department plans to do fully fledged pre-surgical evaluation & surgery for drug resistant epilepsy & including functional neurosurgery in collision with the department of neurosurgery. We have also achieved the first step towards this goal by successfully performing vagal nerve stimulation therapy for drug resistant epilepsy.

New procedure

- Vagal Nerve Stimulation for Drug Resistant Epilepsy, First to be done in Southern Tamilnadu.
- PET CT Brain for the evaluation of drug resistant epilepsy.
- Mechanical Thrombectomy for large intracranial vessel occlusion one of the leading centers in Southern Tamil Nadu.

- Nerve Biopsy & muscle biopsy.
- Advance treatment for Refractory Neuro Immune disorders.
- Bedside EEG, Nerve conduction study, Video EEG.
- Intra dural sinus thrombolysis with IV urokinase for severe CVT - first to be done in Southern Tamil Nadu.
- IV Thrombolysis with IV Alteplase, one of the starting centres & leading centre for acute stroke since 2009.

Academic activities

- Regular CME's in our hospital in various topics ranging from stroke, Epilepsy.
- Attended various Neurological conference in Tajkistan, Bangkok, Cape Town, Lisbon, Rome, Singapore, Sydney various world congress meeting.
- We conduct Regular public awareness program for stroke.
- Regular clinical case presentations for medicine post graduates.

Awards / Publication

- Stroke followed by Bee sting - world stroke conference.
- Varicella infection of Brain in post transplant Recipient, Co author - American.
- Journal of Nephrology Nerve conduction study in Type I Diabetes mellitus.
- Factor VII A in spontaneous Intracranial Hemorrhage IAN – Platform presentation.
- Guinness award for participation in Stroke awareness.

Future Plan

- Carotid Endarterectomy & carotid artery stenting.
- Basilar artery and vertebral artery stenting.
- Pre surgical evaluation & surgery for drug resistant epilepsy.
- Deep brain stimulation for parkinson's disease.



NEUROSURGERY



The department of Neuro surgery came back to track this year after more than 2 years of covid related problems. The number of surgeries that were done increased drastically this year. A new consultant joined our team this year, Dr. Gowtham Kuncha who did DrNB Neuro surgery from our own institute and then went to Italy for Neuroendo vascular training in Cannizzaro Hospital, Catania, Italy, one of the world's renowned places for Neuro endovascular procedures.

The number of cases done by minimally invasive procedures, neuroendovascular procedure and Neuroendoscope is slowly increasing compared to previous years. We did a complicated double barrel bypass for a brain aneurysm first time in Tamil Nadu. Our morbidity and mortality for brain tumor were on par with the best centre in the world. Recently we installed a 32 channel intra operative neuro monitoring system which made all complicated neurological procedure safer than ever.

Our DrNB Neurosurgical training programme also was recognised by National Board of Examinations for Medical Sciences (NBEMS) to

have 2 candidates every year. Our Senior Consultant Dr. K. Selvamuthukumaran gave as invited lecture in TANS held at Thanjavur. During this year Dr. S. Balaji DrNB Resident got 1st prize for paper presentation in TANS 20-22 held at Thanjavur.

Our post graduates presented 2 platform presentations in NSI conference held at Agra, 2 platform presentations in Neurotrauma conference held at Visakhapatnam and 3 presentations in TANS conference in Thanjavur.

We conducted a one day Neuro conference in our hospital which was attended by over 100 doctors in (Neuro update 2022) South Tamil Nadu.

This year we also started full time in house neuroendovascular services like Mechanical thrombectomy for acute stroke, coiling and flow diverter procedure for ruptured and unruptured aneurysm, embolizations for AVM, AV fistula etc. We are planning to establish a centre of excellence Neuro vascular sciences, both micro vascular and endovascular, in a world class quality in the future..

Infrastructure

- Dedicated 11 bedded Neuro Critical Care ICU.
- Fully equipped Operation Theater for Neuro Surgery.
- Neuro Navigation.
- Advanced operating Microscope.
- Dedicated C arm.
- High speed electric and pneumatic drills.
- CUSA.
- Dedicated Neuro intensivist for intra and post operative care.
- Dedicated Neuro rehabilitation team.
- Fully equipped Cathlab for Neuro Vascular Interventions.
- 877 (around 900) patients underwent various neurosurgical procedures in the department of Neurosurgery from the month of April 2022 – March 2023.

Future plans

Though we master various subspecialties in the Neuro Science we are planning to spread our skills in the field of non lesional epilepsy surgeries and complex vascular bypass surgeries.





NUCLEAR MEDICINE



Nuclear medicine department of MMHRC is the only such facility in south Tamil Nadu. Established in 1996, the department has successfully completed 20 years of service. All types of nuclear medicine procedures are performed routinely. The department also boasts of the only radioiodine ward facility in the entire south Tamil Nadu.

Equipments and facilities available

- A. State of the art Dual Head Gamma Camera (GE Discovery NM 630).
- B. Two bed high dose radio-nuclide therapy ward.
- C. Low dose therapy.
- D. Beta therapy.
- E. State of the art PET-CT facility (GE Discovery IQ 3 ring with Q clear technology).
- F. Gamma imaging probe with intra-operative localization facility.
- G. Mammi - Dedicated breast PET imaging.

All routine nuclear medicine procedures like renal scintigraphy, bone scintigraphy, cardiac scintigraphy etc is being carried out. In addition to this rare procedures like lympho-scintigraphy for

lymphatic leak and lymphatic obstruction, MIBG scan for catecholamine secreting tumor imaging, lung perfusion scintigraphy and diabetic foot evaluation are also carried out.

Fusion imaging (SPECT-CT) for diabetic foot evaluation, parathyroid gland localization and low back pain patients were also performed.

High dose radio-iodine ablation for thyroid carcinoma was performed for over 200 patients with excellent results comparable to international standards. Out-patient treatment of Graves disease, toxic adenoma and toxic multinodular goitre were performed.

Re-differentiation therapy of thyroid cancer using sodium valproate was performed in asymptomatic patients with negative iodine scan and elevated thyroglobulin levels.

Oncology patients benefited from the presence of PET-CT scan facilities at our hospital. More than 1200 PET-CT studies help the oncologists tailor the treatment and avoid adverse effects.

Several cardiac patients also benefited from PET-CT facility. PET-CT identified hibernating myocardium in many patients and this allowed the patient to undergo successful revascularization.

Statistics: April 2022 to March 2023	
Diagnostic Procedures	Number
Renal Scintigraphy	2495
Bone Scintigraphy	75
Thyroid and endocrine procedures	211
Cardiac Scintigraphy	179
Miscellaneous	149
Sentinel node - Gamma Probe imaging	31
Iodine scans (Pre and post treatment scans)	700
Total	3840
Consultations	Number of patients
Out patients - New	3416
Out patients - Review	4116
Cross consultations	704
Total	7866
Therapeutic procedures	Number
Thyroid cancer treatment (IP)	239
Bone Pain Treatment	Nil
Hyperthyroidism treatment (OP)	78
Lutetium based therapy	Nil
Total	317
PET-CT Scan	
FDG PET-CT	2548
Gallium PET CT	274
Total	2822
Total = 14845	

Guest lecturers delivered

- Dr. CNB Harisankar was an invited faculty in the Annual conference of Society of nuclear medicine India, organized by Fortis hospitals, Bangalore and delivered a talk on “Radioiodine is not associated with increased risk of second malignancy”.
- Dr. CNB Harisankar was an invited faculty in the Annual conference of Society of Nuclear medicine physicians India, organized by AIIMS, New Delhi and delivered a talk on “MAMMI - Dedicated breast PET imaging - MMHRC experience”.
- Dr. CNB Harisankar was an invited faculty in the Masterclasss in Theranostics - PSMA updated, organized by MIOT hospitals, Chennai and delivered a talk on “Lu-PSMA in prostate cancer - Present scientific evidence”.



OBESITY, BARIATRIC & METABOLIC SPECIALITIES



Introduction

In India, where 270 million people live below the poverty line, obesity seems to be a distant issue, meant for rich kids of first world. But India is under siege: junk food, alcohol and sedentary lifestyle are leading us to silent self destruction, making one in every five Indian men and women either obese or overweight.

According to a study published in the noted journal Lancet, India is just behind US and China in this global hazard list of top 10 countries with highest number of obese people.

And the problem is expected to get worse as obesity is increasing and “no national success stories have been reported in the past 33 years.” According to Christopher Murray, director of the institute for Health Metrics and Evaluation (IHME) that conducted the analysis for the study, further obesity among children and adolescents too is rising rapidly.

Indians had faced under nutrition for a long time and are now being exposed to the “over nutrition of the modern world through globalization”. “India is currently witnessing rising numbers of people in the middle-class who are obese. A lot of the Indian population has started relying on processed of trans-fat, sugars, and other unhealthy and artificial ingredients. Obesity is considered the core of many diseases. Increased weight carries significant health risks for some cancers, diabetes, heart diseases and strokes.

Obesity clinic at MMHRC

The obesity clinic at MMHRC is relatively young but has achieved much in the field. The centre has evolved a unique multi-disciplinary approach to treating obesity.

The Department has successfully treated around 2539 Patients so far, since 2017. We have wide range of weight loss programs available including Dietary weight loss, Endoscopic weight loss procedures & Bariatric & Diabetes Surgery. Patients treated under our department are on regular follow up with good, sustaining results.

Weight loss procedures

1. Endoscopic Sleeve Gastroplasty (ESG).
2. Single Incision Laparoscopic Banded sleeve Gastrectomy (SILS-SG).
3. Laparoscopic sleeve Gastrectomy.
4. Laparoscopic Banded Roux-en-y Gastric bypass (B-RYGB).
5. Laparoscopic Banded Mini Gastric Bypass (B-MGB/ B-OAGB).
6. Robotic assisted Banded Mini Gastric Bypass (B-MGB/ B-OAGB).
7. Laparoscopic Roux-en-y Gastric Bypass (RYGB).
8. Robotic Roux-en-y Gastric Bypass.
9. Laparoscopic Mini Gastric Bypass (MGB/ OAGB).
10. Endoscopy Guided adjustable Intra gastric Balloon placement (IGB)



OBSTETRICS & GYNAECOLOGY



Introduction

It has been another remarkable academic year for The Department of Obstetrics and Gynecology, MMHRC, thanks to the dedicated team of doctors and paramedical staff. This year we directed our focus on holistic patient care, education, community awareness and research. We were able to continue our long-standing tradition of delivering the best evidence-based care to women of all ages, socio-economic and ethnic backgrounds. We strived to provide educational opportunities at all levels of training. This year, we have broadened our horizon of care to include women from distant parts of the country via Telemedicine services. We have also increased our attention to adolescent gynecological issues and strived to improve vaccination and nutrition.

Faculty Highlights

Dr. S. PADMA

senior consultant and HOD

Fellowship in Gynecological Oncology from Amsterdam, Netherlands (2010).

Observer in the Fetal Medicine Unit of Iowa (2009).

Observer in the Fetal surgery unit of Fetal Care Centre, Cincinnati Children's Hospital, Ohio, University of Cincinnati, USA (2014).

Fetal Ultrasound Programme from Bangalore Fetal Medicine Centre (2019).

Professional recognition from ESGO (European Society of Gynecological Oncology) for work and contribution in the field of Gynecological Oncology (2023).

Dr. S. Mahalakshmi

Senior Consultant

Special interest in Community Gynecology and Preventive Oncology.

Dr. D. Vanitha

Consultant

Fetal Ultrasound Programme from Bangalore Fetal Medicine Centre (2020).

Fellowship in Minimal Access Surgery from World Laparoscopy Hospital, Gurgaon.

Dr. Daphin. P

Consultant

Certified to perform first trimester aneuploidy screening by FMF (Fetal Medicine Foundation, UK).

Fellowship in Minimal Access Surgery from World Laparoscopy Hospital, Gurgaon.

Observer in Gynecological Oncology at Kidwai Cancer Institute, Bangalore.

Dr. Catherine Leela. P

Consultant

Certified to perform first trimester aneuploidy screening by FMF (Fetal Medicine Foundation, UK).

Trained in Laparoscopy from Dr. Ramesh Hospital, Bangalore.

Dr. Anandita

Associate Consultant

MCh. Gynecological Oncology, Amrita Institute of Medical Sciences (2022).

Certified Robotic (Xi) Surgeon.

Obstetrics

In the Division of Obstetrics we believe in providing respectful maternal care, strive to preserve and improve the health of pregnant women in the pre-pregnancy, ante-partum, intra-partum and post-partum periods. We are one of the chief tertiary care referral centres for high risk pregnancies and pregnancy - related complications as we provide state of the art multidisciplinary care with expert assistance from various other Departments like Radiology, Pediatrics, Cardiology, Nephrology, Neurology, Diabetology, Medical and Surgical Gastroenterology and round the clock Blood Bank Services.

Clinical services

1. Preconceptional health care
2. **Fetal medicine:**
 - a. Genetic counseling.
 - b. Prenatal diagnosis and treatment.
 - c. Multiple pregnancy clinic (twins).
3. High risk pregnancy screening and multidisciplinary management.
4. High Dependency Unit.
5. Well equipped labor room and adjacent theatre complex.
6. Labour analgesia.

Gynaecology

Our Gynecology division is a leader in Minimal Access - Advanced Laparoscopic, Robotic and Hysteroscopic surgeries which offers quicker recovery, lesser post-operative pain and better cosmetic outcome.

Paediatric and adolescent gynecology:

We have performed several corrective surgeries for genital tract malformations at our Centre with good functional results. We also offer a range of investigations and surgeries in paediatric and adolescent age group the foremost of them being Laparoscopy for ovarian cyst torsion, puberty menorrhagia, adolescent PCOS management, genito-urinary TB, endometriosis etc.

Family planning

We are Government recognized for performing sterilisation procedures. Appropriate family planning counseling on temporary and permanent methods is offered to all couples with special emphasis on LARCs (Long Acting Reversible Contraception).

Gynecological oncology:

Screening, early detection and providing optimal care for women with gynecological malignancies remains an important part of our services.

We offer preventive measures such as HPV vaccination to adolescent girls and young women. We have a dedicated screening programme for cervical cancer with conventional PAP smears, Liquid based cytology and HPV co-testing. We also provide colposcopy, cone biopsy and LEEP/ LLETZ when indicated.

With the increasing prevalence of endometrial and ovarian malignancies, we perform radical surgeries for the various Gynecological malignancies with good 5 year survival rates. Radical hysterectomy with pelvic lymph node dissection is being done both by open and laparoscopic approach in early stage disease. We have integrated postoperative follow up, radiotherapy, chemotherapy and palliative care.

Urogynaecology

We offer a range of procedures namely site specific repair of pelvic organ prolapse, high uterosacral ligation, sacrospinous fixation and abdominal sacrocolpopexy and pectopexy - both open and laparoscopic approach for Vault prolapse.

Innovations

Enhanced Recovery After Surgery (ERAS) protocols (fast-track) were developed and implemented with the goal of optimizing peri-operative patient outcomes without increasing postoperative complications or re-admissions. We implemented tailor-made ERAS protocols for major gynecological surgeries and cesarean sections particularly laparoscopic hysterectomy and observed good patient satisfaction and early discharge from the hospital after 24 hours of surgery with comparable results.

We strive to perform fertility preserving surgeries for early and borderline gynecological malignancies in young women and provide appropriate follow up and counselling for the parents.

We provide dedicated Genetic counselling sessions every month to guide couples with history of genetic diseases who are planning pregnancy and for expert counselling in ongoing pregnancies. We have reliable quality laboratory back up for genetic tests within a reasonable turn-around time.

With increasing cesarean section rates, there has been a significant increase in scar ectopic pregnancies which we have dealt with minimal access technique particularly in women wishing future fertility.

Universal screening for aneuploidy is offered to all pregnant women after pre-test counselling. In women who wish to avoid the small risk of miscarriage associated with amniocentesis, NIPT (Non Invasive Prenatal Testing) is offered as the primary aneuploidy screening modality due to its increased sensitivity. For women who have significant fetal structural anomalies or soft markers on imaging, we offer amniocentesis and appropriate genetic testing. In couples who

present with a previous child with inherited conditions and also when parents themselves are known to be carriers of mutations, invasive testing of the fetus in the present pregnancy with Sanger's sequencing as and when appropriate is offered.

We were able to cater to several women from other parts of the country via the Telemedicine service and were able to guide them in investigating and providing conservative management options for their gynecological issues from the comfort of their hometowns. Women who required surgical management were able to utilize the continuity of care.

Academic activities

We conduct weekly seminars and case discussions regularly for the DNB programme. We also conducted regular internal assessment evaluation for our residents both in theory and practical aspects. Our DNB residents made us proud by bagging awards at state and national conferences.

1. Dr. Thirekha bagged the third prize at the 29th Annual MOGS conference for "The Epidemiology and Treatment of GTD in a tertiary care hospital".
2. Dr. Revathi bagged the first prize for the paper "A very rare presentation of post-hysterectomy leiomyosarcoma".
3. Dr. Gopika won the first prize for the paper "Scar Endometriosis - A menace of surgery" at the EndoMarch competition conducted by FOGSI endometriosis committee.

Future plans

We propose to extend the horizon of fetal therapy to fetoscopy, laser photocoagulation for TTTS (Twin to Twin Transfusion Syndrome), fetal shunt placement and amniotic band resection.

We propose to enhance fertility sparing surgeries particularly in young women with various gynecological pathologies and promote enhanced recovery pathways in more women to improve patient experience.



OPHTHALMOLOGY



The facility mainly provides supportive role for the rest of the hospital, by attending to eye conditions in patients who have other ailments.

However the department is equipped with modern equipment to cater to all advanced forms of cataract surgery, glaucoma surgery, retinal laser therapy, and ocular trauma care, and therefore attracts many direct patients.

True to the objectives of the hospital, the department has a broad engagement in community service with cataract screening camps held in surrounding eight districts regularly. The selected patients receive free cataract surgery with IOL implantation.

The unit is geared towards meeting further challenge of diabetic eye disease, that is of epidemic proportions, Emphasis on screening diabetic patient, delivering, counselling and treatment are important components of this endeavour. Laser treatment and Intravitreal antiangiogenic injections are available in the unit.

Facilities and equipment

- Sophisticated tertiary level eye care.
- Cornea care.
- IOL clinic for on demand sutureless phacoemulsification surgery with early visual rehabilitation.
- Glaucoma clinic for exclusive glaucoma care, anti-glaucoma surgeries and combined procedures.

Opticals

The Department of Ophthalmology at MMHRC ensures that the underprivileged have access to world-class treatment and medicines. It also has a section for optical on campus for the benefit of economically-backward patients. Rehabilitation of visually handicapped patients is also a major priority area. The department is expanding its existing contact lens clinic to include a low vision center.

Statistics

Total new patients	-	1250
Total review patients	-	3421
Total surgeries	-	345



ORTHOPAEDICS AND TRAUMATOLOGY

Life is mobility

The department of Orthopaedics and Traumatology has become one of the tertiary referral centres for management of Musculoskeletal disorders, Total Joint Replacements, Trauma, Arthroscopic and Spine Surgeries. We are backed with the state of the art facilities in the management of trauma. We are well experienced in managing mass casualty cases.

Academics

- We are a post graduate teaching centre and have been training and teaching students to attain the P.G Degree of Diplomate of National Board in Orthopedics Surgery for over 23 years. We have an intake of 5 DNB students every year.
- DNB Teaching Programme.
- DNB /FAT Examination center.
- Journal clubs are regularly conducted.

Publications

- Monthly paper publications in Madurai Medical journal (Publication from the Hospital reaching to over 10,000 Doctors).
- National publications at journal of Orthopaedics and joint surgery (JOJS).
- Interesting cases publication.

Conference

- Our HOD, Dr. V. Sathyanarayana served as President of Madurai Orthopaedics Society for 2 years (2021 - 2023).

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CASE REPORT

The Surprising Tale of Dark Replacement

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Source of support: Nil

- Our Consultants and Post graduates are regularly attending International, National, and Regional Conferences and workshops.

Out patient care

- 1) Specialty OPD (Arthroplasty, Arthroscopy, Paediatric Ortho, Spine Surgery, Trauma).
- 2) Day care procedures like de Quervains release, Carpal Tunnel Release, Trigger finger release, Manipulations under Anaesthesia, Intraarticular injections, PRP Injections etc.

Emergency care

- Management of Fracturs and Dislocations.
- Open Injury Management by Emergency Debridement and Eanagement of soft tissues.



- Primary stabilization of fractures in Emergency Department - POP, Skeletal traction, Skin traction.
- Polytrauma Management by Multi speciality modality approach.

Services available

- Total Joint replacements.
- Arthroscopic Surgeries
- Comprehensive Management of Trauma care.
- Comprehensive Management of Spine and Spine related disorders and deformity
- Management of Paediatric deformities and disorders.
- Treatment for Open Fractures with Neurological and Vascular injuries
- Treatment for hand injuries.

Polytrauma management

Teamwork has been a hallmark of functioning in this Institution and availability of many teams has led to successful, simultaneous management of the accident victims, thereby reducing the waiting time for surgery, earlier rehabilitation and also reduced hospital stay.

Miscellaneous

- Dequervain's release.
- Trigger finger release.
- Carpal tunnel release.
- Baker's cyst excision.
- Manipulation under Anaesthesia.

Rehabilitation

We have an experienced Physical Therapy and Rehabilitation department aiding in early mobilization and rehabilitation of patient thereby improving functional outcome.

Geriatric population care

- Focus on Geriatric population to prevent osteoporotic fractures.
- Conducted BMD camp on Bone and joint day (4th August).

Special interest

AVN Management

- After the Covid 19 pandemic, there is a substantial increase in Patients having

Avascular Necrosis of Femoral Head and Secondary Arthritis. We are using a Newer technique to prevent the progression of the Avascular Necrosis and are awaiting long term results.

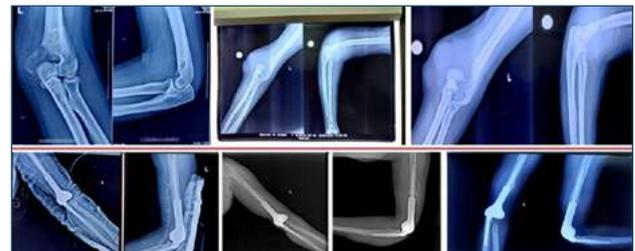
Infection Management

- We have devised our own technique of custom made Antibiotic Rods and Beads in the management of Osteomyelitis with or without Pathological Fractures with very encouraging results.
- We have our own Innovative way of treating Periprosthetic infections by our own Antibiotic Spacer preparation and doing staged Revision Surgery and the Results are very Promising.



Oncology

- Custom made Mega Prosthesis is being used for Limb Salvage Surgery in cases of Wide Excision of Tumours both Benign and Malignant.



Centre for paediatric orthopedics and deformity correction

The paediatric orthopedic clinic runs every Wednesday and in the last one year the activities of the centre has progressed significantly. The centre works along with the child developmental centre. We have undertaken more than 50 complex deformity corrections. We have conducted outreach camps in Rameshwaram and Tuticorin. We have met many doctors in and around Madurai to bring awareness about paediatric orthopedics and deformity corrections. There is also regular teaching for DNB students.

JOINTS AND SPORTS INJURIES CENTER



Joint and sport injuries center of MMHRC has a dedicated team of experienced orthopedic surgeons providing expertise care to all the Joints problems, Sports injuries and Complex trauma. Our expertise includes minimally invasive surgeries and we have a state of the art and most advanced Arthroscopic instruments. We have expertise in treatment of all complicated and infected joint replacement for revision joint replacement surgeries.

We run dedicated clinic catering to specific joints in our outpatient with day care surgeries for small ailments. Now we have a “Center for Sports Rehabilitation”, to cater our patients for Post-Surgery Rehabilitation. We believe in continuous learning and upgrading ourself. Our work has been presented in overseas conferences and training and we have been invited to give lecture about our work in various conferences.

Sports Rehabilitation is the process of deciding when an injured player may safely return to practice or competition. The main goal is to return to training or competition without putting the individual or others at undue risk of injury or re-injury. Physical therapist are the professional capable of using a safe, evidence based and educated approach towards the patient.

How we treat

- Proper Assessment
- Therapy goal settings
- Manual therapy
- Kinesiology Tapping
- Myofascial Release therapy

- Trigger point therapy
- Cross fit mobility
- Instrument Assisted soft tissue mobilization

Services available

Day-Care Surgeries

- Carpal tunnel Release
- Trigger finger release
- Dequervain Tenosynovitis
- Shoulder Manipulation
- Implant removal

Joint conserving surgeries

Osteotomy

- High Tibial Osteotomy
- Distal Femur Osteotomy

Joint Replacement

- Unicondylar Knee Replacement
- Total Knee Replacement
- Total Hip Replacement
- Proximal Femoral Replacement
- Reverse Shoulder Replacement
- Elbow Replacement

Revision Joint Replacement

- Revision Total Knee Replacement
- Revision Total Knee Replacement

Arthroscopy

Knee Arthroscopy

- Arthroscopic ACL Reconstruction
- Arthroscopic PCL Reconstruction
- Arthroscopic Meniscal Repair
- Medial Patello-Femoral Ligament Reconstruction
- Multi Ligament Repair for Knee Dislocation
- Postero lateral corner Reconstruction
- Subchondroplasty

Shoulder Arthroscopy

- Arthroscopic Rotator Cuff Repair
- Arthroscopic Bankart Repair

- Arthroscopic Barbotage for Calcific Tendinitis
- Arthroscopic Distal clavicle resection for AC Joint Arthritis
- Arthroscopic Sub acromial decompression
- Latarjet Procedure for Shoulder Dislocation
- Biceps Tenodesis

Ankle Arthroscopy

- Arthroscopic Debridement
- Arthroscopic Microfracture
- Arthroscopic Loose body Removal

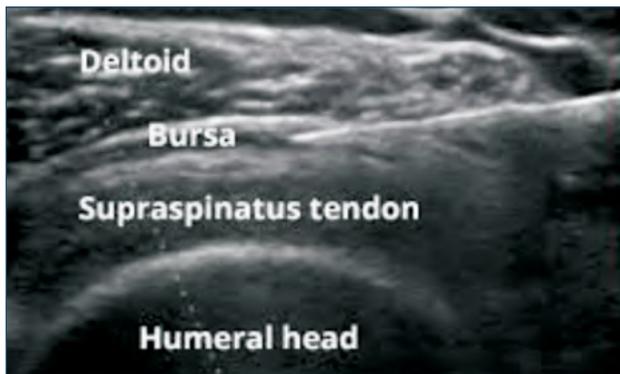
Day care procedures

- High Volume injection - Tendinitis – Tendinitis



அல்ட்ராசவுண்ட் மூலம் தோள்பட்டையில் உட்சி.
அல்ட்ராசவுண்ட் மூலம் கை வால்பூம் இன்ஜெக்ஷன்
(High Volume Injection)

- USG Guided Barbotage and injections



- In-House PRP Concentrate



தட்டணு உட்சி
(PRP Injection)

- US guided injection



Foot and Ankle Clinic

In India the number of diabetic patients is increasing at an exponential rate. Long standing Diabetics is prone for diabetic foot ulcer. Diabetic peripheral neuropathy and peripheral arterial disease predispose these patients to foot ulcer. Foot ulcer once it develops is difficult to treat and foot infection is one of the common causes of amputations in Diabetic patients. It is better to prevent foot ulcer from occurring, and once it occurs it needs a multi disciplinary approach. In Meenakshi Mission Hospital we have started a foot clinic where three important tests are done.

1. Foot pressure study, by this study we can find out any abnormal pressure areas in the foot and treat them accordingly.
2. Automated Doppler ABI study. To find out if the patient has peripheral arterial disease.
3. Biothesiometry. This test is to find out if the patient has any peripheral neuropathy.

By doing these tests we can find out if the patient is at risk of developing a foot ulcer.

This foot clinic is supported by a multi disciplinary team headed.

1. Dr. U T Vassan
2. Dr. Mahesh Babu, Diabetologist
3. Dr. Prabhu kumarapan, Vascular Surgeon
4. Dr. Binita Beck, Plastic Surgeon

This team is supported by trained nurses, and by Mr Ashok, Orthotist.

We already conducted an awareness program for the hospital staff and we are planning to conduct a CME program on Diabetic foot in the month of August 2023.

SPINE CLINIC



Orthopaedic department in Meenakshi Mission has 'State of the Art' treatment for Spine problems and has a reputation in this field for over two decades. Patients from all over India and few overseas countries have sought treatment and benefited from world-class care at a reasonable cost.

In the last financial year, we have treated 2670 patients in the out-patient Spine clinic and have performed 229 major operative procedures. We have also consulted patients in remote areas of the country through our Tele-medicine department. We have also attended camps in West Bengal, bimonthly and have provided treatment to the under privileged. Last year alone we have operated on 9 patients from West Bengal, 2 from Andaman, 2 from Bangladesh and 1 from Africa.



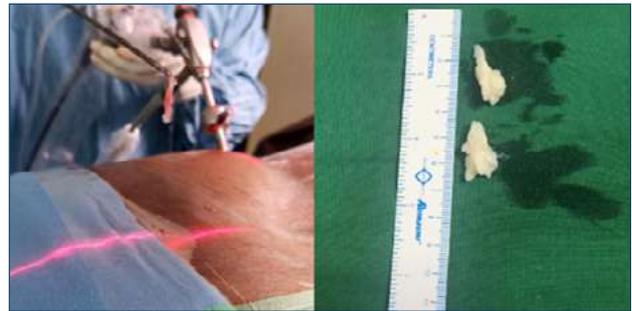
Newer Procedures

Newer techniques are continuously being adapted in the department with latest addition being Transforaminal endoscopic discectomy and sacral osteotomy for paediatric deformity correction.

- Paediatric spinal deformity correction surgery by sacral osteotomy.



- Transforaminal Endoscopic discectomy:



Academic activities

Scientific Studies are carried out regularly to audit our work and are frequently published in peer reviewed journals. In 2022-23, we have published 2 articles in peer reviewed journals and have presented our scientific papers in the International conference (SICOT) held in Sep 22 in Malaysia. The postgraduates in the orthopedic department have presented four spine papers in the annual state and national conferences in the medal category.

Marketing activities:

- Scoliosis expert talk and a webinar on 'கீழ்முதுகுவலி' - அறிவோம்.
- Chaired a session in a CME on Spine fracture management.
- Back pain awareness talk in Heavy water plant.



PAEDIATRIC HEMATOLOGY-ONCOLOGY

The division of Pediatric hematology-oncology is in the continuum to cure increasing number of children with benign as well as malignant blood disorders and solid tumors. Our patients cure rates are in par with the western countries. They are referred to us from general physicians and pediatricians across the southern districts of Tamil Nadu.

Comprehensive cancer care

- Department of Pediatric Hematology and Oncology at MMHRC stands unique in the fact that it serves a comprehensive care delivered by Specialized team of doctors including hematologist, bone marrow transplantation specialist, pediatric oncologist, pediatric intensivist, pediatric surgeons, pediatricians, surgical oncologist, pathologists, radiologists, nuclear radiologist, radiation oncologist, neurologist, neurosurgeons.
- We have been credited with blood bank services providing blood and blood products 24 x 7, which is an inevitable part of treating benign and malignant blood disorders. We have facilities to cryopreserve stem cells for

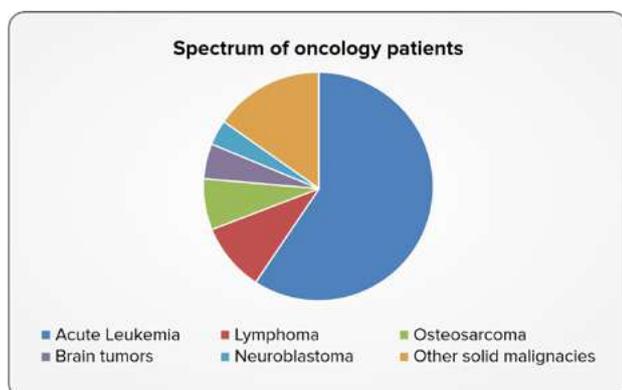
autologous and allogenic stem cell transplantation.

- Diagnosing a child with cancer is one of the sadest news that the family could ever hear. We have well trained psychosocial support staffs who help the parents to overcome the grief. They assist parents with psychological support. They also analyse the financial limits of the parents and does the needful to channelize the required funds for patient care.
- The department academic personnel engages our kids and adolescents with an number of toys, event activities and scholastic books. Our Nutritionist works in a wholesome manner in delivering the missed out calories and proteins for our malnourished children. We are in hand with NGOs, to whom we are thankful, to support our cancer children with chemotherapy, antibiotics and nutritional support.

Performance

Paediatric oncology patients: In the past twelve months ending March 2022, we have treated 123 newly diagnosed patients with various types of cancer at the Camila Children's Cancer Center.

The most common types of cancers include leukemias and lymphomas, brain tumors, and a variety of solid tumors including neuroblastoma, Wilms tumor, and Ewing sarcoma, osteosarcoma, rhabdomyosarcoma and some rare cancers.



Statistics

Pediatric Hemato - Oncology

S.No	Particular	Total Number of Patients	Average Per Month
1	OP review patients	7188	600
2	IP Patients Census	1425	118
3	Bone Marrow Transplantation	24	2

Rare malignancies diagnosed

- We had diagnosed Infant acute lymphoblastic leukemia in 4 infants and one acute undifferentiated leukemia in last year. These are rare leukemias in pediatric age group. They have been started with chemotherapy, attained remission and on follow up.
- An adolescent boy who had generalised lymphadenopathy and splenomegaly was diagnosed to be Interdigitating Dendritic Cell Sarcoma, an extremely rare variety of Dendritic cell tumors.
- 2 month old baby was diagnosed to have hepatoblastoma, a rare embryonic liver tumor in children. Baby was stabilized, received chemotherapy followed by hepatic segment resection. Baby is now 1.5 years of age and on follow up.

Notable procedures done in Paediatric Oncology

- Stem cell transplantation is done for patients with relapse and refractory Bone marrow disorders like high risk Acute leukemias and myelodysplastic syndrome. Generally stem cell transplantation is done with full HLA matched sibling or rarely parents. A patient has only less than 30% chance of getting a HLA identical donor for stem cell transplantation. For those patients with malignant disorders without full HLA matched related donor the practice is to utilize HLA matched unrelated donor or haploidentical stem cell transplantation.
- We have done 15 pediatric bone marrow transplantation in last year for high risk acute leukemias, MDS, thalassemia, aplastic anemia and Fanconi anemia.
- We have pioneered in Haplo identical Haematopoietic stem cell transplantation in South TamilNadu since 2016. We do Tcell replete graft with Post transplant cyclophosphamide.
- We have also experience with alfa/beta T cell depleted Haplo identical Haematopoietic stem cell transplantation for benign blood disorders.
- As we follow these patients for more than five years, our estimate of cure and survival for these children with cancer is about 75%. With better strategies to treat cancer, prevent infections and ensure compliance, we aim to achieve a cure rate of 90% that is commonly seen in the developed nations.

Paediatric Hematology: We have seen 198 new hematology patients. Their diagnoses include: thalassemia, iron deficiency anemia, ITP, SLE, Fanconi anemia, Aplastic anemia; and other pancytopenias, Bleeding disorders including hemophilias. We have diagnosed congenital and acquired HUS/TTP and patients have improved with plasmapheresis therapy.

A commitment to treat all children with cancer: We have been upholding our principle and commitment to treat all children with cancer regardless of the financial capability of the parents, thanks to the unlimited support from MMHRC and a generous support from Camila Children's Cancer Fund. The fund supports the



patients by paying for expensive cancer chemotherapy drugs and antibiotics.

More than 450 patients have received help from CCCF amounting to an average of 10 lakhs per month. We continue to receive generous donations from the public including many of the physicians practicing in the community.

Grants and major funding

Nativity Waves - 2022: This fund raising event of different mudras and movements involving a captivating variety of forms that range from world famous Kavadi aatam to kummi folk dance and themmangu to Oppari village songs was conducted with the co-ordination of R & D team of MMHRC on March 2022. The event raised funds to the tune of **Rs. 23,00,000/-**

Resource and Development conducted event- Carnival for a Cause 2023: With the help of Resource and Development Dept. a mega event was conducted for the treatment of children with cancer, on March 2023.

We raise funds for Camila Children's Cancer Fund through various activities of R&D, Cash Box donations, Women's Welfare Syndicate, Annai terasa charitable Trust, Prime minister's National Relief Fund and Chief Minister's health insurance scheme. On an average a newly diagnosed child with cancer gets financial aid to the tune of Rs. 6,00,000/- from the above mentioned support.

Our Institution also received approval for financial aid for patients undergoing Bone Marrow Transplantation from the Tamil Nadu Government through TNHSP. Through this aid eligible patients get a support of Rs.9,50,000/- approximately, for allogenic Bone Marrow Transplantation and Rs.3,00,000/- for autologous Bone Marrow



Transplantation. Haplo identical & Unrelated Bone marrow transplantation and Rs.17,00,000 /-. With this help we perform Transplantations free of cost to the patient!

Cancer awareness and survivor meetings

- We celebrated Diwali, Children's day, Christmas and New year with the young patients and surprised them with dresses and crackers.
- Cancer Survivor Meet, September 2022. We follow up our patients after completion of therapy for upto 10 years. We record their short and long term adverse effects and monitor their wellness. We conduct cancer survivor meet in 'World cancer awareness month' of september every year. Our cancer warriors and their parents come with joy and spirit every year. They spread their word of courage to newly diagnosed cancer children and their care takers. This year we were overwhelmed with about 150 cancer survivors who stunned us with their event shows and talents. we had four couples this year! We encouraged the survivors with medals and certificates as a word of appreciation. The day was freezed with joy and thankfulness!
- We thank the hospital administration for their unlimited support, our colleagues from various other departments for their tireless cooperation; our nursing and other support staff in our division for their tireless dedication; and most importantly all the physicians in the community who put their patients welfare and quality of life as priority and refer their patients to this center where we care for every single child with cancer and blood disorders regardless of their income, status and paying capability.



PAEDIATRICS AND NEONATOLOGY



Introduction

It is a pleasure for us to introduce the annual report for the department of paediatrics. This report reflects the amazing work done by our chief and faculty in the areas of clinical paediatrics, training, education and research. As a referral center we are providing excellent service to many complicated cases and still we give a great emphasize on primary health care.

Through our dedicated service we have acquired a very good reputation for diagnosing and treating all types of paediatric cases. We always have a patient centered strategic plan that inspires and motivates us to improve all aspects of child health and well being with in the hospital and throughout the community. Today our commitment and responsibility to best outcome encompasses on all core paediatric issues.

- We offer a complete range of healthcare services for children from birth supporting all through their childhood and growing years. We offer the following comprehensive paediatric care services as a part of our Outpatient and Inpatient department.

- Critical care supported by our level 3, Neonatal intensive care unit (NICU) and paediatric intensive care unit (PICU).
- Care of illness supported by our multi disciplinary specialty services including, general paediatrics, Neonatology, nephrology, neurology, cardiology, gastroenterology, hematology, nutrition and rehabilitation.
- Vaccination, immunization and developmental assessment programs.
- Preventive health care advocated through a series of awareness and Wellness programs.
- High risk neonates follow up program.
- Paediatric asthma clinic.
- Paediatric surgery.
- Nutrition and health education.

Neonatal intensive care unit

Our NICU is 25 bedded

To avoid cross infection the unit is divided into septic and aseptic units. Round the clock availability of consultants, DNB residents and trained medical officers.



- One to one care with well trained NICU nursing staffs.
- We also have a separate unit for Departmental library in the ICU.

Salient features

- Treating newborn in our NICU always give us immense pleasure and satisfaction. We have a great concern in the recovery of our babies and this is accomplished by vigilant monitoring by our team.
- Our neonatal intensive care unit is well known for its excellent service to term, preterm and sick newborn babies.
- Utmost importance is given to aseptic techniques while dealing with neonates.
- MMHRC is one of the best hospital in Madurai to provide surfactant therapy and ventilator care with high frequency ventilation for premature babies.
- The outcome of premature babies treated with surfactant therapy & parenteral nutrition and babies with hyperbilirubinemia treated with exchange transfusion and phototherapy are well comparable with any other well equipped tertiary care centre in our country.
- Ventilator care and surfactant therapy provided here have improved the survival rate of VLBW and ELBW preterm babies.
- Exchange transfusion has saved many newborn with Rh hemolytic disease without any sequelae.
- All sick cases requiring inotropic support are managed with central venous access which is done under strict aseptic precautions.
- We have an established transport system to transport sick babies from outside hospital to our NICU. Our transport unit is equipped with adequate equipments, Transport ventilator, qualified paediatrician and NICU trained nursing staff.

Paediatric ward

- General Paediatric ward is equipped with centralized oxygen supply, critical care resuscitation trolley, suction apparatus, intubation sets, emergency drugs, nebulizers, cardiac monitors, pulse oximeter, infusion pumps.
- We have abundance experience in treating cases of viral hemorrhagic fever. We are proud to say that MMHRC has provided its best in treating these kids with a least case fatality rate.
- We have diagnosed many cases of scrub typhus and managed them effectively.
- With the help of blood bank and free availability of blood component therapy, complicated and rare bleeding disorders, platelet disorders,

thalassemia, septicemia & haemophilia are managed successfully.

- Several interesting yet complicated cases and rare syndrome have been diagnosed and treated in our department successfully.
- Super specialties in surgery, urology and plastic surgery help us to provide the best treatment to children with acute surgical and urological problems and also correction for congenital anomalies.
- Our team of physicians and nurses provide emotional support and individualized attention to all paediatric patients and their families.
- Our support staff organizes and takes care of admission procedure, makes discharge arrangement and helps you understand insurance benefits that you may be eligible for.
- We are dedicated to providing the highest quality of health care for your child and it includes, routine well child, care right from birth to adolescence, treatment for illness and 24 x 7 paediatric emergency services.
- Ward procedures like ICD, LP, Peritoneal tapping will be done under aseptic conditions.

Paediatrics OPD

- The department has considerable expertise in treating all common. Paediatric problems. The child will be examined in all domains including growth assessment, dietary assessment, developmental assessment, routine immunization and immunization in special situations.
- According to latest IAP schedule, all vaccines are offered to children and optional vaccines are offered to children in special situation and to normal children after one to one discussion with the parents.
- We do followup of chronic cases like, Nephrotic Syndrome, Rheumatic heart disease, cerebral palsy, epilepsy, developmental delay, Asthma, diabetes, genetic diseases like Down's syndrome, CAH, IEM, etc.
- All rare cases which are referred here for further management are properly evaluated, managed and counselled with all expertise advice.

- As per our aim to serve poor people, we are also conducting free paediatric health camps on every Saturday to the lower socio economic group children. Laboratory investigations are done at concessional rate during these camp days. By this economically deprived people are also getting superior treatment from our hospital.
- We also provide free immunization (BCG & OPV) on all working days.

Academics

- The department also runs a postgraduate course affiliated to the national board of examinations (NBE), New delhi, where by four residents are enrolled every year through a national entrance exam and centralized merit based counselling.
- There are currently 11 DNB residents in the department, 7 Primary (Post MBBS) and 4 secondary (Post DCH). Their academic activities include regular seminars, Journal clubs, case presentation, group discussions, OSCEs, thesis / dissertations and their research works.
- Senior & experienced professors are taking classes for the residents.
- Our PG's actively participate in the monthly clinical society meetings of the hospital as well as paediatric CME's and conferences held at other places also.
- Various research activities are carried out in the department of paediatrics & Neonatology. Our PG's are doing research about childhood seizures, retinopathy of prematurity, Neonatal sepsis, congenital anomalies in newborn, Neonatal jaundice, scrub typhus and febrile seizures.

The department of Paediatrics & Neonatology has treated 15255 out patients and 2025 in patients from April 2022 to March 2023. The various types of cases treated as inpatients in the department of paediatrics and neonatology are as follows.



PAEDIATRIC ICU

Paediatric Intensive Care Unit (PICU) at MMHRC was the first tertiary care centre to be set up in south Tamil Nadu in 2011. The PICU is a 8 bedded unit with state of the art diagnostic and treatment facilities providing highest level of care to critically ill children.

Services

- A well trained & experienced critical care team headed by a qualified Paediatric Intensivist.
- 24 / 7 care by Paediatric resident doctors.
- Nursing care - Well trained critical care nurses providing care at 1:1 patient nurse ratio.
- Support team - Respiratory therapist, Physiotherapist, Dietitian and a social worker.
- Multispeciality team - Paediatric surgery, Paediatric hemato-oncology, Radiology, Neurology, Neurosurgery, Nephrology, Gastroenterology and Cardiology.
- Isolation room - A separate isolation room with barrier nursing facility to manage immunocompromised children and children with contagious diseases like chicken pox, measles, tuberculosis and MRSA infection.

Facilities

- High end Mechanical ventilators.
- Non invasive ventilation - BIPAP, HFNC.
- Bedside Echocardiography, Ultrasound.
- Multimodal monitors.
- Intra -arterial blood pressure (IBP) monitoring.

- Continuous end tidal CO₂ (ET CO₂) monitoring.
- Invasive intracranial pressure (ICP) monitoring.
- Continuous EEG.

Bedside procedures

- Chest tube placements.
- Peritoneal dialysis, Hemodialysis.
- Bronchoscopy - flexible and rigid.
- Intrososseous line placement.
- Bone marrow aspiration & biopsy.
- External ventricular drain (EVD).

Paediatric procedural sedation services

We assist paediatric oncology and paediatric surgery department by providing sedation for minor operative procedures and for bone marrow aspiration and intrathecal chemotherapy procedures.

PICU transport service

A Paediatric ICU transport team mobilizes sick children from referral centres to PICU.

Statistics

Outpatients	: 240
New	: 70
Review	: 164
Cross	: 6
Inpatients	: 60



PAEDIATRIC SURGERY

Department of paediatric surgery has completed 12 years in our hospital. With a senior paediatric surgeon available round the clock, the division offers dedicated surgical service to children.

In a very eventful span of more than a decade since 2011, we have operated many complicated neonatal and other paediatric surgical cases. With the excellent newborn services in the hospital, we are able to perform major neonatal surgeries like tracheo esophageal fistula, congenital diaphragmatic hernia, bowel atresias, anorectal malformations and able to give very good post operative care. Sick older children are taken care of in paediatric intensive care unit and post operative care to them is given by the paediatric surgeon along with qualified paediatric intensivist.

As we have a very advanced paediatric oncology division in the hospital, we regularly operate paediatric solid tumors like Wilms' tumor, neuroblastoma, germ cell tumors etc. In fact, ours is the only center in South Tamil Nadu performing highest number of chemoport and Hickman catheter placements, for administering chemotherapy in children. This is a milestone in

care for children with cancer which has improved their quality of life. Placement of such access catheters also plays a major role in bone marrow transplantation and related treatment. Our experience of the life port insertions has been published in Indian Journal of Paediatrics (IJP) and has been presented in the world conference of paediatric surgeons in Berlin and it was appreciated well.

Statistics

Outpatients	:	1255
New	:	186
Review	:	729
Cross	:	340
Inpatients	:	227
Major Surgeries	:	228
Minor Surgeries	:	163

Our team is providing all paediatric surgical services including, neonatal surgeries gastro intestinal and hepatobiliary surgeries, paediatric thoracic surgeries, paediatric urological open

surgeries, endo urological procedures and oncological surgeries.

Many Paediatric surgical procedures like herniotomy and circumcision are done as day care procedures, which is appreciated by the parents and referring doctors .

Other activities

Academic

Teaching programme for paediatric and general surgery DNB residents.

Memberships

- Association of surgeon of India.
- Founder member in Association of minimal access surgeons of India.
- Paediatric Endoscopic Surgeons of India.
- Asian Association of Paediatric Surgeons (AAPS).
- Indian Association of Paediatric Surgeons.
- Indian Society of Paediatric Urology.

Meetings & conferences that was attended

- Annual conference of paediatric surgeons of India (PESICON2022) at GOA.
- IAPS- Tamilnadu Pondicherry chapter conference CHEPSCON held at Chennai.
- Annual conference of Paediatric Endo Surgeons of India (PESICON2023) at Pondicherry.
- Annual conference of Tamil Nadu & Pondicherry Paediatric Surgeons at Tenkasi.





PHARMACY



Our hospital has an on-site pharmacy department, to ensure the right medicines are received at the right time, through a highly efficient and economical system. We adopt and apply the best pharmaceutical expertise to help in maximizing drug efficacy and minimize drug toxicity.

Services

- 24 hour Pharmacy.
- Quality patient care services.
- Our entire system is computerized.
- Online prescription for In patients & Out patients.
- Well-trained and qualified pharmacists.
- Delivery of standard medicines to the customers.
- Well-stocked with all necessary pharmaceutical and medical products.
- Disposables, surgical, anti-cancer and life saving drugs also available.
- Adheres to the guidelines as per Drugs & Cosmetics Act of 1948 for Pharmacy Management.

- Genuine medicines from leading manufacturers, available round-the-clock.
- Controlled temperature helps in maintaining quality and efficacy of medicines.
- Vaccines are Maintained through ILR (Ice Lined Refrigerator).
- During Pandemic Situation we deliver Covid Medicine at the right time to Patients.

Objectives

- To educate the patients.
- To work towards maximum customer-focus.
- To facilitate adverse drug monitoring.
- To ensure quality patient services at all times.

Main goals of our Pharmacy are

- To provide Maximum patient care.
- To ensure Quality patient Service.
- To educate Patients.
- To facilitate Adverse drug monitoring.



PHYSIOTHERAPY

Introduction

The department of physiotherapy at MMHRC works towards restoring the functioning of the body, reducing the impact of dysfunction, disability and pain which might have been caused through trauma and disease. The patient comes first is the department's philosophy. The physiotherapy department is one of the largest in its class and works across all sub-specialties. It is also equipped with all largest equipments. We have qualified and highly experienced team of physiotherapists providing OP services (direct & referral) and IP services (wards, post operative wards and intensive care units) with treatment procedures conforming to exact international standards.

The core idea at the department of physiotherapy is to ensure that rehabilitation is achieved within shortest period possible, making life near normal for the patient at the earliest. The physiotherapists provide a wide range of therapies after examination, tailored to suit individual needs. The department strives to improve each patient's mobility and health and to reduce the risk of injuries.

Facilities

- **Diagnostic:** SD curve / MS testing / ADL assessment.
- **Mechanical:** Traction- cervical/ lumbar/pelvic / CPM for lower extremity, Tilttable, Rowing, Treadmill.
- **Manual mobilization therapies:** mobilization couch with specific features for mobilization.
- **Exercise therapy:** Active / Assisted / Passive / Resisted/ Graded resisted exercises, PNF techniques, Suspension therapy, theraband / Tube exercises.
- **Chest physiotherapy:** Assessment of pulmonary functions, Therapeutic functions, Postural drainage, Therapeutic, interventional physiotherapeutic procedures, Breathing exercises, incentive spirometer, Humidification, Home care and follow-ups.
- **Gynae / obsteric:** Antenatal and postnatal exercises, Postural correction and awareness, fitness - Assessment and improvement, etc.,
- **Post operative cardiac surgeries:** Pre and post-operative physiotherapeutic exercise for cardiac surgery patients including breathing exercises, chest maneuvers, Humidification, Nebulization, Incentive spirometers, Limb physiotherapy and cardiac Rehab phase I-IV.
- **Neurological disorders:** Proper positioning of the limbs (anti synergistic patterns), general
- **Electrotherapy:** SWD / IFT / ultrasonic / NM stimulator, T.E.N.S., Paraffin wax-bath, cryotherapy.

mobility and strengthening exercises, PNF and Bobath.

- **ICU post - Surgical care:** Chest physio and general mobility exercises, Incentive spirometer exercises, Bronchial hygiene, proper positioning of the operative side / part and ambulation.
- **Oncology and Palliative care:** Physiotherapy in the field of oncology and palliative care is a continuously evolving and developing specialty. The aim of physiotherapy is to maximize independence and dignity and reduce the extent of cancer and other life-limiting illnesses which interfere with an individual's physical, psychosocial and economic functioning. Physiotherapy focuses on the care and treatment of wide range of physical problems, which may optimize and enhance the patient's quality of life.

Therapeutics

- **Manual therapy:** Stretching, Manual resistance training, joint mobilization and manipulation, Manual lymphatic drainage (post lymphedema), Chest physiotherapy etc.,
- Kinesiology taping (k -tape).
- **Electrotherapy Techniques:** Short-wave diathermy, Ultrasound therapy (1 mhz, 3 mhz), pelvic and cervical traction (continuous and intermittent), Interferential therapy Wax-bath, Electrical Neuromuscular Stimulator, T.E.N.S, Vacuum therapy etc.,
- **Exercises:** Posture training, Muscle strengthening, cardio-vascular training and stretching.
- Other services offered by the department include advice orthosis and prosthesis (post amputation), and offering of information regarding equipment aids (wheelchair, walking aids), taping and splinting.

New launching equipments

- DTS Spinal Decompression Therapy.
- Multimode Electro Modality (IFT, US, T.E.N.S., Vacuum therapy, Laser, EMG, MS stimulator, Combo therapy).
- Cryo Compression Therapy.
- GYM Equipments - Tread Mill, Multi station, Elliptical & Bosu Ball.

Specialities in physiotherapy

- Pain management following musculo skeletal and neurological disorders.
- Orthopedic Rehabilitation following hip, knee and shoulder replacements, spinal surgeries and post operative condition.
- Hand Rehabilitation following fractures, tendon injuries, tender transfers and nerve injuries.
- Neurological Rehabilitation for traumatic brain injury, spinal cord injuries and other neurological medical condition like GBS, stroke, multi sclerosis and Parkinson's disease etc.
- Paediatric Rehabilitation for developmental and other neuro muscular disorder.
- Early stimulation techniques in high risk new born.
- Neuro development therapy (NDT) for global developmental delay children.
- Geriatric Rehabilitation.
- Cardio-pulmonary Rehabilitation.
- Rehabilitation following burns, plastic and reconstructive surgeries.
- Obsterics and Gynaecological physiotherapy.
- Ergonomics for all professionals.
- Sport Rehabilitation.

Sport physiotherapists assess the sport injuries for movement restrictions. Rom limitations, stability and flexibility to recommend rehabilitation therapies.

Statistics

No of patients

In Patients : 6354

Out Patients : 5493

Workload

In Patients : 82006

Out Patients : 7325

Future plan

- Well equipped rehabilitation set up with advance facilities.
- Hydro Therapy Pool.
- Robotic Gait Lab.
- College of Physiotherapy.



PLASTIC SURGERY

Introduction

Plastic Surgery is a surgical specialty involving restoration, reconstruction or alternation of the human body. It can be divided into two main categories.

- Reconstructive surgery
- Cosmetic surgery

Reconstructive surgery

It is performed to restore function and normal appearance and correct deformities created by birth defect, trauma and cancer. Reconstructive surgery includes craniofacial surgery, hand surgery, micro vascular surgery, flap surgery, cleft lip/ palate repair and congenital deformities correction and treatments of burns.

Cosmetic surgery

Cosmetic surgery (Aesthetic) aims at improving the appearance of the body and removing the signs of aging.

Cosmetic surgery again divided into surgical and non surgical procedure most commonly performed cosmetic surgeries and liposuction, breast augmentation, breast reduction,

abdominoplasty, eyelid surgery, facelift and rhinoplasty.

The department of plastic surgery at MMHRC is well-equipped to handle the most complex cases, backed by qualified doctors, modern equipment and dedicated staff. The department deals with reconstructive surgery, cosmetic surgery, management of burn, hand surgery and microvascular surgery.

Facilities available at MMHRC

Reconstructive Surgery

- Hand surgery.
- Brachial plexus surgery.
- Microvascular surgery.
- Management of Trauma and reconstruction.
- Correction of birth deformities.
- Management of acute burns and correction of deformities.

Cosmetic Surgery

- Liposuction.
- Breast augmentation.
- Breast reduction.

- Mastopexy.
- Body contouring.
- Rhinoplasty.
- Face-Lift.
- Botox.
- Dermabrasion.

Smile train – Cleft Surgery

It is a congenital split (or) opening in lip (cleft lip) or at the roof of mouth (Cleft palate). Etiology is usually not predictable, but it is believed that cleft lip and palate may occur due to hereditary, nutritional deficiency (or) environmental factors during antenatal period. In India 1 in 1000 live birth cleft babies are born.

Types

- Cleft lip may be either unilateral (one side) or bilateral (both side).
- Cleft palate may occur either single or in associated with cleft lip.

- Unilateral cleft lip can be operated at 3 months of age.
- Bilateral cleft lip can be operated at 4 months of age.
- Cleft palate can be operated at 9 months of age.
- Maximum age of operating cleft surgery is 40 years.

After surgery the patients must come yearly once check up till 18 years of age so that further need of surgeries like Revision palate, Pharyngeal flap, Secondary nose correction & Alveolar bone graft can be performed.

In MMHRC we are doing all cleft surgeries at free of cost. We are providing free food to the patients, free pre & post op speech therapy.

Future plans

- The department has to improve micro vascular and Reconstructive surgery.
- To improve cosmetic surgery.

CLEFT LIP



PALATE



Health Check-up



PREVENTIVE MEDICINE



Introduction

The Department of Preventive Medicine at MMHRC offers various packages for health check-ups. Today's common people are subjected to far more stress and strain than those at any time in the past. The present day lifestyle makes it mandatory for everyone to undergo a complete health check-up at least once in six months. In the West, surprisingly, 50% of patient inflow into MMHRC is for preventive health check-ups, instead of treatment. We keep in pace with this excellent practice, that urges people to come in for check-ups regularly. Because after the entire healthiest attitude to have the one is prevention is better than cure.

More than 11000 persons have been benefited through our department per year from various location of India and foreign countries (Maldives, Singapore, Malaysia, United kingdom, South Africa) and more than 100% of people from it have been identified with minor and major complications and been treated accordingly to prevent from high risk of their life. All age group have availed these services.

Achievements

Ramco Group (Rajapalayam mills) employees Annual Health Check-up had performed (Beneficiaries - 463 members).

Academic activities

- Introduced special offer package for World Liver Day 2022. (Beneficiaries - 47 members).
- Performed mobile Health Check-up for TVS Argomm private Ltd., employees (Beneficiaries-208 members) in their campus - Therkkuthuru, Madurai.
- Introduced special offer package for World Women's Day 2022 (Beneficiaries - 116 members).
- Introduced special offer package for Independence Day 2022 (Beneficiaries - 283 members).
- Special offer packages were made for World Heart day 2022 (Beneficiaries - 2385 members).
- Special offer packages were made for World Cancer day 2022 (Beneficiaries - 11 members).

- Diwali Special offer packages on introduced and successfully performed for the year of 2022 (Beneficiaries - 303).
- Special offer packages were made for World Diabetic day 2022 (Beneficiaries - 363 members).
- Special offer packages on we introduced on the occasion of both Christmas 2022 and Healthy New year 2023 (Beneficiaries - 337).
- Performed one day in house camp for World Heart Day 2022(Beneficiaries - 102 members).
- Performed one day in house camp for World Diabetic Day 2022(Beneficiaries - 60 members).
- Performed one day in house camp for World kidney Day 2023 (Beneficiaries - 72 members).
- Special offer packages were made to prevent from breast cancer 2023 (Beneficiaries - 16 members).

- Special offer packages were made for World Women's day 2023 (Beneficiaries - 123 members).

Data

Year	Beneficiaries	Income
2022-2023	8726	3,81,36,544

Future plans

- Planning to conduct special camp for school children every year during summer with consultations at Rs.700/-.
- Planning each and every super speciality camp to be conduct every month for down south districts.
- Planning cardiology camp for Adult and peadiatric to be conduct every month for down south districts.





PSYCHIATRY

The Department of Psychiatry continues in the visionary path of providing quality mental health therapeutic care in a cost effective way for the mentally ill populace of Tamil Nadu in tandem with the avowed motto of our hospital - "Affordable World Class Care". Psychopharmacological strategies based on rigorous evidence based standards of care coupled with psychotherapeutic techniques adapted for socio-cultural milieu of the region has always remained and shall continue to be the fundamental principle that encompasses the treatment and care provided by the department.

The mainstay of consultation-liaison services provided by the department is

Crisis intervention counselling for suicide attempters admitted in IRCU motivation enhancement counselling to tackle alcohol related problems and Relapse prevention counselling for alcohol dependent individuals admitted with GIT and Hepatic complications treated in the department of Gastroenterology. Management of psychiatric disorders associated with chronic kidney disease in department of Nephrology Acute care management of Delirium in all ICUs.

Management of Anxiety Disorders, Depression, Medically unexplained Physical symptoms, Psychosomatic disorders and Smoking Cessation treatment cover the gamut of outpatient care provided via cost effective client centred techniques and interventions.

The department of Psychiatry vows to continue providing cost effective treatment designed exclusively to alleviate the suffering of the mentally ill patients of Tamil Nadu.

Psychiatric services

The department provides services in the super specialty fields of psychiatry such as:

- De-addiction Psychiatry – treatment for alcohol dependence / smoking.
- Neuropsychiatry.
- Child Psychiatry.
- Consultation-Liaison Psychiatry.
- Geriatric Psychiatry.
- Psychosomatic Medicine.
- Psychotherapeutic and Counselling Services.
- Treatment for social media addiction, internet gaming addiction.
- Cyber Psychiatry.
- Tele Psychiatry.

Psychotherapeutic and counselling services

- Cognitive behaviour therapy.
- Crisis intervention Counselling.
- Somatic Reattribution Counselling.
- Marital Counselling.



PULMONOLOGY & SLEEP MEDICINE



The Department of Pulmonology and Sleep Medicine at MMHRC was started in 2013 with the aim of delivering quality clinical services to patients suffering from respiratory diseases. The department caters to a wide spectrum of diseases of the chest, ranging from airway disorders like COPD and bronchial asthma, infections like pneumonia and tuberculosis, pleural disorders, carcinomas of the respiratory tract, occupation-related lung disorders, interstitial lung diseases, sleep-related breathing disorders, etc.,

Since its inception the department is growing steadily. Many patients have benefitted from diagnosis and treatment of sleep related breathing disorders.

Comprehensive care for Asthma, COPD and treatment for all forms of Tuberculosis (Pulmonary and Extra-pulmonary) - Drug sensitive and Drug resistant (MDR-TB) is provided at this department.

A dedicated Sleep Lab with sleep lab technician is available for the diagnosis and treatment of Sleep related breathing disorders.

Facilities and equipment

- OPD: Monday-Saturday daily from 9am to 6pm.
- Inpatient General Ward, Private rooms, Deluxe rooms, ICU's.
- Multispeciality consultations round the clock with 24 hour emergency services.
- 24 hour Biochemistry, Pathology and Microbiology laboratory (NABL Accredited).
- Comprehensive Sleep Lab.
- Comprehensive Spirometry.
- Diffusing capacity for carbon monoxide (DLCO).
- Fractional exhaled Nitric Oxide (FeNO).
- Bronchoscopy - Elective and Emergency.
- 6 minute walk test.
- Advanced diagnostic methods for Drug resistant Tuberculosis.

Services offered

1. Outpatient clinics:

- Respiratory outpatient services: All working days (9:00 AM to 6.00 PM).

2. In-patient services:

- 8 general beds which includes, 4 Isolation beds.
- ICU care.

3. Allergy unit:

- Skin prick test.

4. Pulmonary Function Lab:

- Spirometry.
- Diffusing capacity for Carbon monoxide diffusion (DLCO).
- Fractional exhaled nitric oxide (FeNO).

5. Bronchoscopy services:

- Fiberoptic and Video Bronchoscopy with BAL, EBB, TBLB, TBNA.
- ICU - Bronchoscopy - Diagnostic / Therapeutic.

6. Ultrasound guided Interventions:

- Chest sonography.
- ICD/ Pig tail insertion.
- Pleural biopsy.

7. Exercise testing:

- 6 min. walk test.

8. Pulmonary rehabilitation:

- Chest physiotherapy.
- Respiratory muscle training.

9. Fully Fledged Sleep lab:

- Level 1: Polysomnography.
- Limited channel sleep study, Auto-CPAP titration.
- Manual CPAP titration.

10. Smoking cessation clinic:

- Pharmacological & Non-pharmacological approaches.

11. Post Covid Clinic:

- Assessment, management, rehabilitation and follow up of post covid patients.

12. Adult Vaccination:

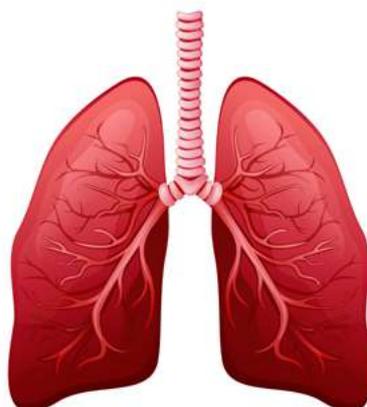
Asthma: Asthma is a lung disease that affects people of all ages. It produces wheezing and makes breathing difficult. Exposure to an allergy or irritant, infections, exercise, emotional stress, and other conditions are all potential triggers.

COPD: Chronic Obstructive Pulmonary Disease (COPD) is a long-term lung illness that makes breathing difficult usually among smokers. When you have one or more of the following conditions, it is referred to be COPD.

- Emphysema.
- Chronic Bronchitis.

Procedures

- Bronchoscopy- Diagnostic and Therapeutic.
- Pleurocentesis - Diagnostic and Therapeutic.
- Pleurodesis.
- Intercostal drainage, Pigtail insertion.
- Lung Biopsy.
- Pleural Biopsy.





RADIATION ONCOLOGY



The Department of Radiation Oncology, a part of the oncology services in our hospital for nearly Thirty three years has treated more number of cancer patients with radiation therapy. The department has one Linear Accelerator equipment with advanced facilities like, IMRT (Intensity Modulated RT), IGRT (Image guided Radiotherapy), VMAT (Volumetric Modulated ARC Therapy). VMAT is the first of its kind in South Tamilnadu. There are a lot of cancer patients who are benefiting with advanced technology as it has very minimal side effects to the Normal tissues. We are equipped with SRS (Stereotactic Radiation Therapy) and SBRT (Stereotactic body radiation therapy) techniques also now. We have treated more number of cases this year. The number of patients treated in this year is increased by more than 10%.

We have installed Radixact -X9 (Tomotherapy) with advanced features of synchrony and clear RT. This machine is the first of it's kind in India and has started functioning from 21 January, 2023.

Tomotherapy with Synchrony and Clear RT

Tomotherapy is a type of cancer therapy in which radiation is aimed at a tumor from many different directions as the patient lies around the table. The radiation source in the machine rotates around the patient in a spiral pattern. The introduction of Tomotherapy with Clear RT

and Synchrony facility has considerably strengthened radiation therapy capabilities at Meenakshi Mission Hospital. It is one of the most ground-breaking developments in radiation in the history of cancer care. Tomotherapy entirely redefines the norm for customized and accurate treatment of malignancies anywhere in the body, while establishing a new paradigm for patient comfort and quality of life.

“With the help of this system, we can precisely target the size, shape and location of the patient’s tumor, thereby reducing normal tissue dose by adjusting the radiation beam’s size, shape and intensity. Compared to traditional cancer treatment systems, Clear RT’s enhanced Image clarity enables doctors to effectively see more, know more, and do more.”

Clinicians can discretely use synchronisation technology to increase the dose delivered to the target and limit the exposure to healthy tissue. The system does away with the necessity for breath holds and patient restraints, which reduces discomfort and enhances the patient experience overall. Multiple targets such as the liver, lung and brain can be treated in one go. A patient or treatment area with a maximum length of 135 cm can be treated without any breaks. In lungs, liver, prostate, etc., moving tumours can be tracked and treated in real time using this technology.

Details about the new technologies

Intensity-modulated radiation therapy (IMRT)

IMRT uses the same linear accelerator as conventional therapy but involves dynamic multi-leaf collimators that use movable "leaves" to conform the radiation beam to the shape of the tumor from multiple directions. IMRT greatly enhances the ability to tailor the radiation dose to each patient's individual anatomy. IMRT also allows higher radiation doses to be focused to regions within the tumor while minimizing the dose to surrounding normal critical structures.

Image-guided radiation therapy (IGRT)

IGRT combines traditional radiation treatment with a simultaneous CT scan or X-ray to allow for greater precision and accuracy when targeting and treating tumors. IGRT is the process of frequent two and three-dimensional imaging, during a course of radiation treatment, to ensure that the treatment volume is being accurately targeted.

Volumetric modulated arc therapy (VMAT)

With volumetric modulated arc therapy (VMAT), single or multiple radiation beams sweep around the patient, greatly reducing treatment time compared to conventional radiation treatment. This new technology also offers the radiation oncologist more control and flexibility to deliver a carefully targeted dose so that only the tumor receives a high dose of radiation.

Other facilities in the Department

1. Siemens Linear Acceleration 2D & 3D.
2. Electron beams can be created with high energy LINACS. This is of particular value in treating superficial lesions.
3. Brachytherapy.
4. Treatment planning system.
5. Mould Room Accessories.

Other facilities in department of radiation oncology

Brachytherapy with Image Guidance (IGBT)

HDR Brachytherapy is a clinically proven and economical option for treatment in various Cancers. ICRT (Ca Cervix & Ca Endometrium), ILRT (Ca Oesophagous), Interstitial (Ca Breast) and Surface Mould Brachytherapy.

Brachytherapy is a high precision radiation therapy, in which a radiation source is placed close to the tumour itself, to kill cancer cells and shrink the tumour. This precision Brachytherapy enables the application of a highly concentrated dose of radiation inside a small area. This causes less damage to the normal tissues and organs over short periods of exposure.

Treatment Planning System (TPS)

Computerized Treatment Planning Systems are used in external and internal beam radiation therapy to generate beam shapes for dose distribution. This provides maximum control and minimizes normal tissue complication while providing a 3D view of patient anatomy and tumour. Besides, the CT scan has networking with TPS which makes the treatment procedure highly precise.

Stereotactic Radiation Therapy

A specialized type of external beam radiation therapy called stereotactic radiation uses focused radiation beams targeting a well-defined tumor, relying on detailed imaging, computerized three-dimensional treatment planning and precise treatment set-up to deliver the radiation dose with extreme accuracy (i.e., stereotactically).

There are two types of stereotactic radiation:

- Stereotactic radiosurgery (SRS) refers to a single or several stereotactic radiation treatments of the brain or spine. SRS is delivered by a team involving a Radiation oncologist and Physicist.
- Stereotactic body radiation therapy (SBRT) refers to one or several stereotactic radiation treatments with the body, excluding the brain or spine.

SRS/SBRT is best for very small tumors. These techniques allow us to give a high dose of radiation to the tumor in a short amount of time. SRS/SBRT is a type of external beam radiation therapy that can be completed in one to five days rather than over several weeks.

The advantage of SRS/SBRT is it delivers the right amount of radiation to the cancer in a shorter amount of time than traditional treatments. Plus the treatment is delivered with extreme accuracy, minimizing the effect on nearby organs.

Dr. K.S.Kirushna Kumar, MD.,(RT),

Head of the Department

1. Presently the Joint Secretary of National Body of Association of Radiation Oncologist of India.
2. Moderator for a Panel titled “Diagnostic and Treatment Dilemma in Patients with Cancer” in 37th State Annual Conference of Association of Radiation Oncologist TN PY chapter, on 24 September, 2022 at Chennai.
3. Panelists in “Soft tissue Sarcoma” session during the 35th Annual National Conference of Indian Association of Surgical Oncology, on 6th -9th October, 2022 at Madurai.
4. Panelists in “Rectal Cancer” session during the 35th Annual National Conference of Indian Association of Surgical Oncology, on 6th - 9th October, 2022 at Madurai.
5. Chair person for Head and Neck session in the 2nd Annual state Conference of Tamilnadu Medical and Pediatric Oncology Society, on 28 January, 2023, at Madurai.

Dr. P. Ananda Selva Kumar, MD.(RT),DNB.(RT), FIPM.,ECMO.,**Conferences attended**

1. On 02 April, 2022 presented an invited talk on “Changing Trends In Radiation For Prostatic Cancer” in Madurai Oncology club, Madurai.
2. On 08 April, 2022 presented “How I Do SBRT For Liver Tumors?” as an invited Faculty in Madurai GUT club.
3. On 19 April, 2022 presented an invited talk on “Recent Trends In Radiation Therapy For Lung Cancer” in Madurai Respiratory club.
4. On 06 June, 2022 presented “Recent Trends In Radiation Oncology” at Paramakudi, Organised by Indian Medical Association.
5. On 08 June, 2022 Participated as a Panelist on “Management Of Brain Secondaries In Breast Cancer”, organised by Velammal Medical College, Madurai.
6. On 26 July, 2022 presented “SBRT in Colorectal Cancers in a National Conference on Colorectal cancers” hosted by Velammal Medical College, Madurai.
7. On 13 August, 2022 attended “Prostate Brachytherapy Practicum” held at Kidwai Memorial Instituted of Oncology, Bangalore.

8. On 02 September, 2022 attended XXth Annual TMH Radiotherapy Practicum on Multimodality Imaging in Radiation Oncology at TMH, Mumbai.
9. On 17 September, 2022 presented “Tips And Trick in Spine SBRT” in a National Stereotaxy Conference held at Visakapatnam.
10. On 24 September, 2022 debated in favour of SBRT and Immunotherapy is the hope in 37th State Conference of Association of Radiation Oncologist TN PY chapter at Chennai.
11. On November, 2022 presented “How to do Spine SBRT?” in chartrounds, India, organised by AROI.
12. On 01 December, 2022 participated as a Panelist in National Conference of association of Radiation Oncologist and involved in “Management of Bone Metastasis” held at Newdelhi.
13. On 28 January, 2023 debated against “Screening & HPV Testing for Head and Neck Cancers” in the 2nd Annual state Conference of Tamilnadu Medical and Paediatric Oncology Society, at Madurai.

Dr. R. Manirathinam, MBBS., MD (RT),**Conference attended**

1. Attended the “Medical Onco State Conference Jan. 2023 - TAMPOS from 27th January, 2023 to 29th January, 202, Madurai.
2. Attended the “Rose Conference”, on 17th & 18th, 2022, Visakhapatnam.

Total number of patients treated during April 2022 to March 2023 - 19820

Out Patient	: 21300
In patient	: 1709
New	: 711
Review	: 19109

Radiation Therapy- April 2022 to March 2023

Total number of patients treated with external radiation therapy	993
Total number of Patients treated with brachytherapy	146
Total number of patients treated with Radiation therapy under Anaesthesia	13



REGIONAL BLOOD TRANSFUSION CENTRE



The MMHRC Blood Bank is a vast department responsible for saving the lives of patients in critical situations. We ensure that every unit of blood leaving the department is safe for our patients.

Our essential functions are donor motivation, blood collection from the appropriate donor, screening of donor blood, processing and preparing blood and blood components, proper storage of blood and blood components, and timely supply of these components to patients. We follow world-class standards and accepted procedures while testing for compatibility. All our tests are cross-checked and meticulously documented. Equipment used in the Blood Bank are calibrated and maintained regularly, while the reagents used are subjected to frequent quality tests.

Special procedures- cell separator

Apart from regular blood bank activities, the Regional Blood Bank at MMHRC also performs blood components separation based on APHAERESIS technique, by employing Apheresis machine from Cobe Spectra and Fresenius Kabi.

By using the above instruments and methods, blood components like Plasma, Platelets, Granulocytes and stem cells can be separated from the donor's blood. The Apheresis cell separator is being used for autologous and allogenic peripheral blood stem cell harvest.

Services

- Creating awareness about voluntary blood donation.
- Motivating blood donors (both voluntary donors and relatives of patients).
- Implementing the stringent selection criteria for blood donors.
- Collection of blood, processing, storage and transportation of blood and its components in the most appropriate way.
- Issue of blood and blood components.
- Conducting blood donation camps.
- Laboratory procedures including serological techniques (Grouping, Cross matching and anti body screening).
- Stringent screening of donor blood (for HIV, HBsAg, HCV, VDRL, MP Etc.).

- Issuing safe blood and its components to patients based on their needs (both for in-patients and patients from other hospitals).

Achievement

- Received the “SAMUGA KAAVALAR VIRUTHU” from Thanjai Tamil Mandram, Valangaiman on 17.04.2022.

Future plans

- To launch the automatic blood grouping system.
- To motivate blood donation movement at schools, colleges and NGO's across South Tamil Nadu.

Statistics

S.No	Particulars	Units
01	Total blood collection	9902
02	Total number of camps	44
03	Total camp collection	2187
04	Voluntary donors	9670
05	Relative donors	232
06	IP and OP grouping	26715

Packed blood cells issued

S.No	Particulars	Units
01	MMHRC	9449
02	Outside	141
03	Government Hospital	367
04	Leucocyte Depleted Packed cell Concentrate	507

Components issued

S.No	Particulars	Units
01	Fresh Frozen Plasma	6725
02	Platelet Concentrate	3833
03	Cryoprecipitate	450
04	Outside Hospital	16

Apheresis procedure issued

S.No	Particulars	Units
01	Single Donor Platelets Procedure	380
02	MNC	55
03	Granulocyte Concentrate	18





SURGERY, SURGICAL & MEDICAL GASTRO ENTEROLOGY



The unit of Surgery and Surgical Gastroenterology is a high volume center for therapeutic Endoscopy, Laparoscopy and Surgical Gastroenterology procedures. Significant number of our patients is treated for gastrointestinal malignancies. We are successfully performing deceased donor liver transplantation approximately one a month. In our department we are regularly during robotic procedure. Robotic surgery helps the surgeon in performing complicated and advanced procedure with ease. It helps in patient in faster recovery and minimal blood loss. GI Malignancies comprises cancer of esophagus, cancer stomach, GIST stomach, liver tumors, periampullary cancers, cancer pancreas, colon and rectal cancers. We provide holistic and multidisciplinary approach to all GI malignancy. Extensive preoperative work up for accurate preoperative staging and standard of care treatment for stage by stage approach is followed. Our department is equipped with Ligasure Force Triad, Thunder Beat, Enseal, Radiofrequency ablation to help us perform surgery faster and with minimal blood loss. Our experience in advanced Laparoscopy helped us in doing GI oncology procedures like,

lap gastrectomy, Lap Hepatic resection, Lap Esophagectomy, Lap Whipple's, Lap colectomy, Lap anterior resection and Lap APR.

In last 30 years department of Surgical Gastroenterology has been pioneer in advanced Laparoscopy in India and world. Below is our list of achievements.

Till now we have performed 39 liver transplantations, with excellent results.

Milestones

- 1) 1992 - The first Laparoscopic Surgery in South Tamil Nadu was executed.
- 2) 1993 - The first Laparoscopic Treatment of Hydatid cyst in the World was been performed.
- 3) 1997 - The first Laparoscopic D2 Gastrectomy for stomach cancer in India has been performed.
- 4) 1999
 - First Laparoscopic Total Colectomy and pouch surgery was performed in India.
 - The first minimally invasive thyroid surgery and minimally invasive axillary clearance in India were performed.

- 5) 2004 - The first centre to perform Laparoscopic Bariatric Surgery in South Tamil Nadu.
- 6) 2015 - The First Laparoscopic 3D system in South Tamil Nadu has been installed.
- 7) 2016
 - The first POEM (Per Oral Endoscopic Myotomy) procedure in South Tamil Nadu has been introduced.
 - The first Laparoscopic Roux - en -y Gastric Bypass surgery in South Tamil Nadu.
- 8) 2018 - First Robotic surgical system in South Tamil Nadu was installed.
- 9) 2021 - Largest adrenal tumor removed laparoscopically in the world.
- 10) 2022 - First Endoscopic sleeve gastropasty done in south Tamil Nadu.

Our Endoscopy division is one of the most active endoscopy units of Tamil Nadu. Our unit is equipped, advanced endoscopes of international standard endoscopic accessories (HI-DEFINATION ENDOSCOPY). We serve as the referral centre for various endoscopic procedures like ERCP – CBD stone removal, biliary stenting, pancreatic stenting, Biliary/Colonic/Esophageal SEMS placement, diagnostic EUS, EUS guided celiac plexus block, EUS guided FNAC, endoscopic polypectomies, endotherapy for fundal varices, percutaneous biliary drainage etc. We receive referrals for emergency therapeutic endoscopies like UGI bleeds, cholangitis, foreign body ingestion which we are capable of doing round the clock. We perform emergency therapeutic procedures like variceal, ligation for bleeding esophageal varices, glue injection for bleeding fundal varices, APC for GAVE, heater probe and hemoclipping for bleeding ulcers, bronchoscopic and gastroscopic foreign body removal. We are routinely doing POEM for Achalasia Cardia.

Esophageal manometry & PH study

Our endoscopy division is equipped with esophageal manometry and 24hrs PH monitoring including impedance measurement. Manometry plays a major role in confirming the diagnosis of Achalasia cardia and also helps in characterizing other esophageal motility disorder like scleroderma. We can perform anorectal

manometry with the same equipment, which helps in evaluation of anal sphincter disorder and constipation. Since we have started 24hrs PH study, we are able to pick up GERD patient who will be benefitted with fundoplication.

Recently we have performed endoscopic over clip application for midesophageal tear due to his bone infection while avoided a major surgical repair of tear.

Robotic surgery

Meenakshi Mission Hospital and Research Centre procured the Davinci SI Surgical Robot in 2019. It has 4 Robotic Arms, which can be controlled by the surgeon. Vision is provided by a 3D High Definition camera system. Various instruments and energy devices are available to use with the Robotic Arms.

The Davinci Surgical Robot finds use in various fields, like, Surgical Gastroenterology, Urology, Gynaecology and Surgical Oncology.

Since its inception, a total of 150 Operations have been done using the Robot. These include Bariatric procedure, Prostatectomy, Pyeloplasties, Thyroidectomies, Hysterectomies, Colorectal Surgeries and Hepatobiliary surgeries. Of note, the first Robotic assisted minimally invasive Liver Resection in South Tamilnadu was performed at Meenakshi Mission Hospital and Research Centre.

Medical Gastroenterology

Department of Gastroenterology at MMHRC is a tertiary referral centre for all sorts of diseases related to GI system, liver and pancreas. Every year the patient numbers increase due to the standard of care offered with an outcome in par with international standards. Right from Emergency room every GI patient who is critically ill can be appropriately managed with contributions from multiple specialists, 24 hrs blood bank, 24 hours Endoscopy service, well equipped GITU (high dependency unit where sick GI and Liver patients are cared for) standard ICUs served round the clock by Intensivists. Patients with UGI bleed, severe acute pancreatitis, mesenteric ischemia, IBD exacerbation, complicated cirrhosis like sepsis, encephalopathy, renal failure and fluid overload are appropriately managed in large numbers.

Current standard of care for acute liver failure is plasma exchange while getting ready for liver transplant. Plasma exchange can be done round the clock at our hospital.

The outpatient service offers treatment for cold cases like dyspepsia, chronic diarrhoea, jaundice, bleeding PR, altered bowel habits, abdominal pain, HBASAg and HCV positive patients, IBS, follow up IBD patients with ulcerative colitis and Crohn's disease, chronic pancreatitis, fatty liver, mild alcoholic liver disease and other Chronic patients like cirrhosis who needs to be on regular follow up. Simple procedures like UGI scopy, sigmoidoscopy, esophageal and anorectal manometry, endoscopic polypectomy, diagnostic Endoscopic Ultrasound, Ammonia breath test to identify H.Pylori infection are all done on OP basis to save time and money for the patient.

Endoscopy unit is one of the busiest in the region serving a big population with standard diagnostic and therapeutic scopy procedures. The unit is equipped with latest UGI scopes and colonoscopes along with Endoscopic ultrasound scope and duodenoscope for ERCP. Doctors and technicians with vast experience are able to jointly provide advanced care in endoscopy room. The unit has its own Fluoroscopy, Boyle's apparatus to make ERCPs faster and easier. We have irrigation pumps for easier and clear views, endowasher for deep cleaning of scopes. We ensure availability of all necessary accessories like hemoclips and gold probes to treat ulcer bleed, Argon plasma coagulation (APC) for GAVE and Radation proctitis, hemospray for post EVL ulcer bleed, Endoloops for large polypectomy, Lithotripter for difficult CBD stones in ERCP. We do lot of diagnostic EUS, EUS guided Core biopsies for mediastinal nodes, pancreatic mass and submucosal lesions. We also do therapeutic EUS like endoscopic cystogastrotomies and biliary drainage. 24 hours ph with impedance study is performed over last few years with lot of referrals from surgeons and surgical Gastroenterologists for their GERD patients. Number of ERPs (Pancreatogram and pancreatic interventions) has gone up in recent years being done for pancreatic strictures, pancreatic leaks and pancreatic ascites.

After through assessment by National board, this year our Department is approved for training two Dr.N.B post graduates per year who join through NEET. Patient care has significantly improved further due to presence of residents who keep following patients closely.

Recent publications our department

- 1) Gastroenterology hepatology endoscopy practice 2021- Ampullary stone in chronic pancreatitis causing obstructive jaundice and cholangitis.
- 2) European journal of Molecular and Clinical Medicine 2021. Clinical profile of patients treated for inflammatory bowel disease in a tertiary care hospital in south india - A cross sectional study.
- 3) International journal of Tropical Disease & health, 2021. A case of acute lead toxicity associated with siddha medication.
- 4) Journal of clinical and diagnostic research 2020, incidence and clinical profile of anti tuberculosis treatment induced hepatitis in a tertiary care hospital in southern india.
- 5) Indian journal of gastroenterology-2021 (Multicentre study) Rodenticide ingestion is an important cause of acute hepatotoxicity in Tamil Nadu, southern india.
- 6) Journal of gastroenterology and hepatology open, 2021 (Multicentre study) inflammatory bowel disease in Tamil Nadu. A survey of demographics, clinical profile and practices.
- 7) Gastroenterology hepatology and endoscopy practice, 2022. Acute liver failure due to hypoxic hepatitis successfully treated with plasma exchange.





SURGICAL ONCOLOGY



Carcinoma endometrium remains the third commonest gynecological malignancy after ovary & cervix. Staging laparotomy is the gold standard but the role of minimally invasive surgery in this group of patients has been validated in several trials. We have started offering robotic hysterectomy for this group of patients, with the advantage of reduced blood loss, shortened recovery time without compromising the oncological safety.

Conferences organized

Dr. R. Vijayabhaskar was the organizing treasurer for the 35th Annual national conference of the Indian association of surgical oncology held at Madurai in October 2022.

Conferences attended

- IASO NATCON 2022.
- Breastanbul 2022 organised by senology society Turkey.
- Mammocrest 2023 Breast oncoplasty live workshop held at Madurai.

Individual accolades

- Dr. R. Vijayabhaskar has been selected as one of the best doctors practising oncology in south India, by a survey conducted by Outlook magazine. His name featured in the list of doctors published by the magazine as a health supplement issue in the month of Oct. 2022.
- Dr. R. Vijayabhaskar delivered the prestigious Dr. N. Sethuraman oration at the ASI Madurai city branch annual meet in the month of Mar. 2023.
- Dr. S. Thalabathik kumara vikram received the gold medal for best outgoing student of Madurai medical college in the university exam for the year 2022.

OP New cases	:	682
OP Review cases	:	4327
Cross consultation	:	1780
Total	:	6789
Admission cases	:	652

OP Cases													
Sur.onco	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Total
New	48	48	42	59	60	62	57	68	68	55	55	60	682
Review	282	305	344	310	387	395	336	365	422	398	377	406	4327
Total	330	353	386	369	447	457	393	433	490	453	432	466	5009
Admission	39	56	53	52	59	55	43	74	54	53	69	45	652

Statistics		
OT cases	Major	Minor
Breast Oncology	102	33
Head & Neck Oncology	164	9
Gynaec Oncology	53	7
Urological Oncology	18	4
Thoracic Oncology	4	10
Gastro intestinal Oncology	22	7
Others	130	191
Total	493	261
Total Cases - 754		





TELEMEDICINE



Vision

To provide accessible and affordable quality care to everyone.

Mission

- To analyze the basic health needs of the people and to provide quality care.
- To analyze each individual in terms of biological, Psychological and Epidemiological aspects.

Telemedicine centres

- Well equipped tele-health centres with trained staffs are maintained at 14 remote locations in Tamil Nadu. Through E platform (REMEDI), expert consultants were providing the quality health care services. These Centres are providing primary health care to the public at free of cost.
- We are the first in India to bring Teladoc device for offering telemedicine health services at North east locations (Kolkatta, Siliguri, Malda and Guwahati). Each centres were medically fully equipped with trained medical officers and paramedical staffs. Routine specialty camps were organized at these centres to provide the accessible and quality care.

Outreach activities

- Frequent outreach camps at remote locations with designated Medical officers were being

organized with the help of NGO's and local leaders.

- Health education and Awareness creation done at the camps.
- Our 1st Cancer Screening and Awareness camp organized at Nilakottai Taluk.

Future plans

- Research Methodology workshops will be organized by the department annually, wherein the delegates from MMHRC and other teaching hospitals will be invited.
- Data maintenance for Communicable and non communicable diseases and Cancer registries will be maintained.
- Cancer screening programs are planned to be organize at all our telemedicine centres.
- Specialty Home care programs will be designed and serviced accordingly.

Categories	Total patients encountered (2022-2023)	Total patients referred (2022-2023)
Tamil Nadu Telemedicine Centres	22289	449
North East Telemedicine Centres	3089	117



VASCULAR AND ENDOVASCULAR SURGERY



The Department of Vascular and Endovascular Surgery has two consultants with rich experience in both Open and Endovascular interventions providing a wide array of treatment for all kind of vascular diseases.

Data

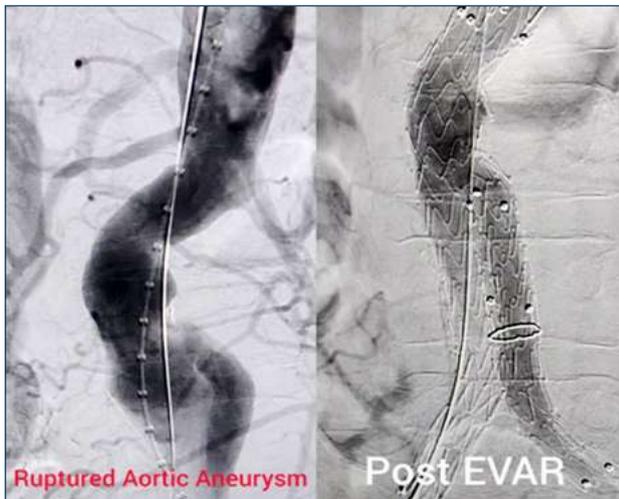
- Between April 2022 to March 2023, Over 3700 OPD patients with various vascular diseases were treated with the best care and treatment.
- Over 500 major vascular procedures including various bypass procedures (105), Angioplasty and Stenting (82) including - Subclavian artery stenting (3), EVAR and TEVAR (4), Aortic Interventions (18), Carotid Endarterectomy (10), Emergency Embolectomies (29), Thrombolysis for arterial thrombosis and Acute DVT, Cervical rib excision with subclavian artery repair (3) were performed with good outcome and very low mortality.
- This Department also treats the Diabetic foot ulcers with various modalities including Diagnostic, Preventive and Therapeutic modalities. Around 200 diabetic foot surgeries

were performed in this time period with early mobilisation and limb salvage.

- Also, congenital vascular disorders including vascular malformations were successfully treated using various techniques of Foam sclerotherapy, Absolute alcohol ablation, Excision, Glue and coil embolization. A total of 22 procedures were performed for vascular malformations.
- OPD procedures including USG guided Varicose veins - Foam sclerotherapy, Glue ablation were performed routinely. Minor diabetic wound debridements, amputations (20) were also performed in OPD basis.

Special procedures

1. We have performed four major Endovascular Aortic Interventions including Endovascular repair of ruptured Aortic Aneurysm (EVAR), Chimney EVAR with Bilateral Renal artery stenting, Thoracic Endovascular Aortic repair (TEVAR) with very short hospital stay and some were done under local anaesthesia.
2. Oncological Vascular Reconstructions were performed including Reconstruction of IVC



- and Iliac veins after resection of tumours and aortic reconstructions were performed.
3. Pharmacomechanical Thrombolysis for Acute DVT including.
 - a. Catheter Directed Thrombolysis.
 - b. Mechanical Penumbra thrombus aspiration.
 - c. Mechanical Angiojet thrombolysis.
 4. Various Arterial reconstructions were performed for Poly Trauma vascular injury, Bull gore injury along with Ortho and Plastic surgery team.
 5. SUBCLAVIAN ARTERY STENTING.
 6. Carotid endarterectomy procedures for stroke prevention is being performed under Regional block with awake neurological monitoring.

Special additions

- A dedicated Diabetic foot care clinic has been started along with Orthopedician, Plastic surgeon and Diabetologist with fully automated complete foot investigation modalities including.
 1. ABI and TBI monitoring.
 2. Plethysmography study.
 3. Dynamic foot scan.
 4. Automated Vibration test.

Thereby all diabetic patients are routinely screened and appropriate treatment is provided to prevent and treat all diabetic foot ulcers in early stage.

- 3rd Generation MEDTRONIC-COVIDIEN RFA generator for performing varicose vein procedures.
- Dedicated vascular Ultrasound doppler machine for bedside procedures, evaluation of arterial and venous system bedside and for performing Ultrasound guided procedures including Gaining Access for Endovascular procedures, Nerve blocks, varicose vein procedures, vein mapping for AV access etc.

Consultants

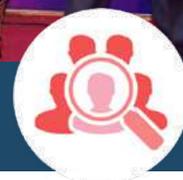
Dr. Saravanan Robinson, Senior Consultant
M.S , M.Ch Vascular surgery.

Dr. Prabhu Kumarappan Chidambaram,
Consultant
M.S , DrNB Vascular Surgery (Gold Medal).

ADMINISTRATION



HUMAN CAPITAL DEVELOPMENT



- MMHRC'S Human Capital Development department holds a unique place because of the Employee Engagement Activities and the training programs that are provided to the employees to work efficiently and also to enrich their knowledge.
- The HCD is managing around 3823 medical and non medical staff, which includes 471 doctors, 991 nursing staff and 2362 supportive staff. We value our staff very highly and strive to make working for the hospital a growing, learning and rewarding experience.
- Around 330 on the job training and 177 off the job training programs has been conducted in the past year. In addition to this, we have also organized 12 Induction and Orientation Program for the newly joined employees. We have covered 25 man hours per employee per year for their training and Individual development.
- We have nominated around 93 Consultants and 250 supportive service employees to participate in the State, National and International conference, seminars, workshops and training.
- In order to know the recent developments in MMHRC, we have conducted 9 internal Awareness programs in the past year for the employees to enrich their knowledge about New Medical Techniques and latest practices adopted.
- Competency Assessment was held for all the Nurses during the month of November and December 2022. The Assessment comprised of written tests, Nursing procedure, Group Discussion and personal interview. The best performing 50 Nurses were shortlisted and awarded.
- In House Continuous Nurses Education program have been conducted for the Nurses twice a month on various topics and the relevant credit points are awarded by Tamil Nadu Nursing Council to the Nursing individuals.
- As a part of social responsibility, students from various educational institutions are provided with training and internship programs in respective departments of MMHRC as per their curriculum.

- MMHRC has instituted various Employees welfare measures like, Free Medical Facilities, Education Allowance, Loan, Free Accommodation, Special Gifts, Creche facility, Reimbursement towards Damage due to calamities, Employee Dependents Funeral Expenses and other benefits that are being beneficial and supportive to the employees.

Special programs and grandeur events:

- Motivational program were organized for all the staff with eminent speakers as Dr. G. Gnana sambandam (Tamil Professor/Writer/Actor) in the month of April 2022 and Dr. Parveen Sultana (Writer/ Educationalist/ Motivational Speaker) in December 2022.

- International Nurses Day was celebrated on 12.05.2022 with a Special address for the Nurses by Mr. Pazha. Karuppiyah (Writer/Actor/ Ex-MLA).
- International Women’s Day celebration took place on 04.03.2023 with a grand Event filled with fun activities exclusively for our female employees. As part of Women’s Day celebration, Sports, Cultural and Fun games were conducted and the winners were awarded in the final Event.
- A grand celebration for all the Doctors was hosted at the “Courtyard by Marriott Hotel for” World Doctor’s Day Celebration” on 21.07.2022. The Consultants and all the other Doctors were awarded “Meritorius Awards” for their exemplary service towards patients.



Motivational program by Dr. G. Gnana Sambandam



Motivational program by Dr. Parveen Sultana



International Nurses Day special address by Mr. Pazha. Karuppiyah



Women’s Day Celebration



Doctor’s Day Celebration



Code Blue Mock Drill



Fire Safety Training



IV Cannulation Techniques



How to Safely Operate ICU COTS



MARKETING



MMHRC's Marketing Department is the one that strictly adheres to the implementation of Marketing strategies like advertisement, branding and promotional tactics.

Our Marketing department comprise of 8 dedicated divisions viz. Referral Marketing; Insurance; Chief Minister Comprehensive Insurance Scheme, Prime Minister National Relief Fund, Corporate, North East Marketing, Camp, Tele-Medicine.

Referral marketing

It is the distinguished division of Marketing Department. And it plays a pivotal role by projecting our MMHRC to almost 300+ Doctors sitting across South Tamil Nadu. Our referral division is being represented by 10 dynamic marketing professionals and they promote the tertiary care services offered by us focusing on the achievements of our hospital, recent activities, specialized care, advanced and unique technologies practiced by us. Also they advocate our vision "No man is too poor to afford first grade medical treatment" and during the ended financial

year, our referral team conducted several activities like Clinical Meets, Festival Function and Doctors' family get-together.

The Number of patients referred from April 2022 - March 2023 was 14,402 and the corresponding revenue collected Rs.101 crores which is an outstanding performance.

Insurance

As an Insurance Desk we are responsible to expedite the Claims as soon as it is intimated by the insured. At our Insurance office, we strenuously as far as possible try to over come some of the potential disadvantages like "additional cost" for policy holders (as a TPA Service charges) and some of the issues with quality of service provided by us. Also we religiously and answer the questions and explain the insurance benefits to the patients and their families thereby developing the rapport with the public.

Around 3000 patients have availed cashless benefits and total business of Rs.19 crores was done. We are in the process of adding more insurance companies and do tie up with them.



CMCHIS

We simply implement the Government Run Scheme meant for the below the poverty line patients as per the government norms thereby making them delighted. Around 2000 patients have availed cashless benefits.

PM fund

We largely provide treatment for Oncology and Nephrology patients. It is known that the PMNRF was established entirely with public contribution and does not get any budgetary support. Annual Income of Rs. 72000 is given for those suffering from major illness. Number of PMNRF patient's availed treatment was 150.

Corporate

In our corporate division we always strive to fulfill the corporate patients' need for treatment. Our number of corporate companies, the number of patients we treat and the amount of collection we achieve every year our directly proportional. We focus primarily to build the relationship with corporate companies / PSUs / Public & Private Limited Companies. Number of MOU signed companies we dealt with last year 12 corporate 3000 patients.

North East Marketing

It is one of the rarest divisions we have which is remotely available elsewhere. Not only our presence but our sincere Service to the patients from North eastern States makes us Popular widely. We provide the relatively cost effective treatment which includes Major Procedures

No of patients - 1426

Camp

Our Health Camps are mobile and are conducted in different locations by qualified Doctors, Nurses, and Paramedics, and Community Health Workers. Health Examinations and tests, on a regular basis at the early stages of Illness can help to cure it faster and save lives before it can cause any damage and hence we conduct MEDICAL CAMPS regularly. We Provide Free Medical advice and Medicine to the Unfortunate People and refer to Specialized treatment Surgery as and when they are required.

The no. of free medical camps Conducted : 500

The no. of paid camps : 70

Appx no. of cases received :3000

Telemedicine & Teledoc

We Offer Expert-based health care to understaffed remote locations and cutting edge emergency treatment through the advanced technology equipments which supports audio visual aids, Video Conferencing equipments and health care related conversation with General Physicians will surely motivate People.

Role of Teledoc in Telemedicine

TELEDOC Telemedicine Robots can do basic Clinical Examinations, on their own based on instructions from Doctors,. Telemedicine robot transmits and receives video, audio, and navigation direction and can take measurement by connecting to other devices like Oscopes and ultrasound.

Master Health Check up

Master Health Check up include a physical examination, ultrasound and laboratory investigation that help evaluate the health of vital organs and metabolism to identify any early symptoms of disease to manage individual health better.

We do operate with appropriate and lucrative plans under our Master Health Check up Division. And ours is one of the Cost effective Master health Centres available in South Tamil Nadu.



QUALITY SERVICE



Quality is never an accident; it is always the result of high intention, sincere efforts, intelligent direction and skillful execution; it represents the wise choice of many alternatives.

Quality is the result of a collective effort and total commitment. We believe in benchmarking ourselves in enhancing customer satisfaction by meeting customer needs and regulatory requirements, with an eye on regularly improving quality and performance. We focus on quality improvement and implementing innovative ideas in every one of the services we offer.

The Customer and we

- We give the at most importance to each and every suggestion from patients, since we realize that their satisfaction is our ultimate goal.
- The Department of Quality Service analyzes customer feedback data in order to understand thoroughly how the care is being delivered.
- We collect feedback forms from the in-patients and out-patients, to ensure quality at all levels.
- We also analyze the feedback and interpret the levels of customer satisfaction, and work towards solving customer complaints amicably.

- Immediate actions are taken to rectify the complaint issues, and an abstract is sent to all the concerned departments for them to take preventive and corrective actions.
- The appreciative comments received from the patients are posted on the “Thank you Wall.” These positive comments motivate our staff at MMHRC

Quality service department

Accreditation

National Accreditation Board for Hospitals and Health care Providers (NABH).

Our Hospital NABH - Pre Accreditation received. Validity is up to 15 Sep 2024. Our journey towards NABH Main Accreditation is in Progress.

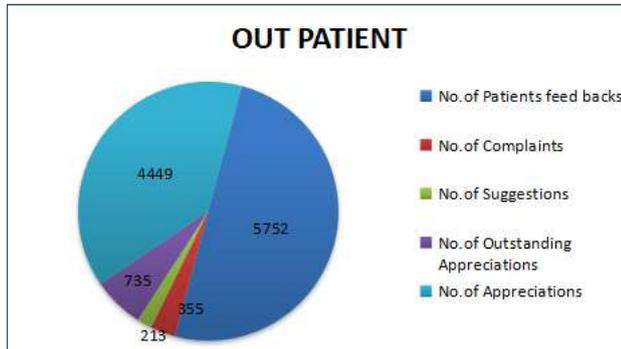
Quality rounds

Our team conducts daily rounds across the whole hospital to ensure quality, identify lapses and provide necessary assistance.

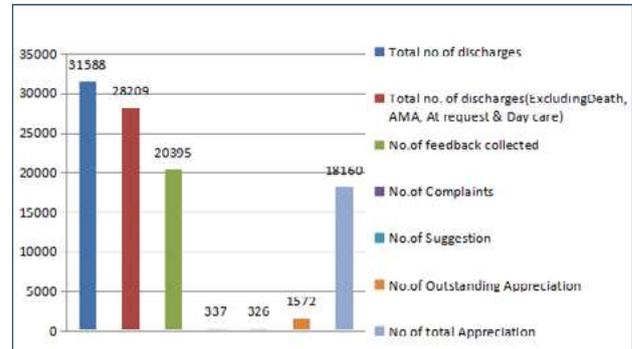
Case sheet audit report

The Audit observation points shared to the top level management & concerned department

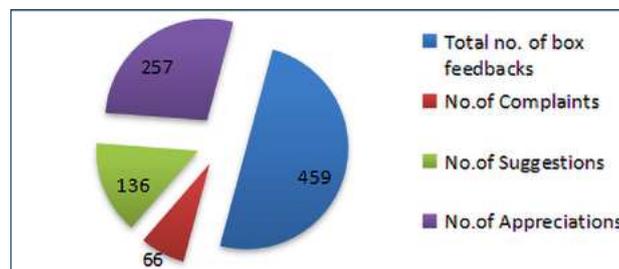
OP Feedbacks



IP Feedbacks



Patient box complaints and suggestions



heads for standardize the case sheet documentation.

Facility audit

Facility audit has been conducted once in six months, the deviation & corrective actions reviewed and implemented.

Statutory documents

The hospital legal documents have been updated periodically our legal compliance rate is 100%.

Manual

Every department manuals / SOP is updated as per NABH 5th Edition standards.

Reimbursement for the year Apr 2022 to Mar 2023

Total No. of Reimbursement document prepared for the out patients : 937
 Total No. of Reimbursement document prepared for the In patients : 2923

Incident Report for the year Apr. 2022 - Mar. 2023

Total No. of Incidents reported : 51

Every incident report has been reviewed, analyzed & taken appropriate corrective & preventive action in a standard manner.

Lost & found handling

The patients/patient attendants who lose their valuables are handled by the quality department.

Transplant Performance for year Apr 2022-Mar 2023

Kidney Live Transplant

Total No. of patients applied in govt for Transplantation : 25
 Total No. of patients approved in govt. : 24
 Total No. of patients Transplanted : 19

Cadaver Transplant

Total No. of patients Cadaver Kidney Transplanted : 7
 Total No. of patients Cadaver Liver Transplanted : 8



Won the Gold Award for Nursing department, Laundry department and Electrical department from Quality Circle Forum of India (QCFI), Madurai chapter on Sept. 2022.



Received NABH certification.

Organ Retrieval (Cadaver) for the year Apr 22-Mar23

Total No. of cadaver donor	:	6
Total No. of Kidneys Harvested & Transplanted	:	7
Total No. of Kidneys Donated	:	5
Total No. of Corneas Donated	:	12
Total No. of Liver Harvested & Transplanted	:	6
Total No. of Heart & Lung Donated	:	4

Corona Report for the year Apr 22-Mar23

Total No. of Admission	:	109
Total No. of Discharge/Refer out	:	108
Total No. of Death	:	1

All the Government portals DMS Office/Joint Director Office and Deputy Director Offices are being updated daily about the corona details.

Awards

MMHRC was awarded the "Best Hospital in South Tamil Nadu" at the News18 Tamil Nadu in March 2022.

Health Care Excellence Award - 2022

MMHRC received the Healthcare Excellence Award for 'Excellence in Community Engagement' and 'Smart / Digital Hospital' from Association of Healthcare Providers of India in 2022.

Best Multi Super Speciality Hospital Award – 2022

Meenakshi Mission Hospital was awarded the "BEST MULTI SUPER SPECIALITY HOSPITAL" at the 14th edition of TANCARE organized by FICCI and the Government of Tamil Nadu in November 2022.

CII TN Awards 2022

MMHRC was awarded the 'Excellence in Emergency & Critical Care, Excellence in Diagnostic Imaging "in Tamil Nadu' at the CII TN Medclave in November 2022.

Employee- Training

Employee training is essential for an organization's success.

This year QSD employees actively participated in 52 training programs organized by the Human Capital Development department.

Quality is not an act, its a habit.



RESOURCE & DEVELOPMENT



What we've achieved in 2022-2023?

As we entered the 3rd Year of the Corona Virus Pandemic, it continued to be an especially difficult time for many of the people that use of our services/donors. Our priorities enabled us to respond quickly and effectively to the immediate needs of our service users, donors and well-wishers. We continued to support people to lead good life.

PROJECTS	
Smile Train (Reimbursement)	77,54,400
Amway India Enterprises Pvt Ltd	9,08,400
Telemedicine Geriatric Project, Ramnad	5,37,797
NTEP Grant	1,87,500
Crèche Grant	80,000
TOTAL	94,68,097

GRANTS IN RUPEES	
Donor Nurturing	47,12,646
Meril Life Sciences	35,00,000
Donation Box	34,22,107
Event-Cultural For a Cause-2023	27,33,105
M/S Hemant Surgical Company	20,00,000
Ketto	19,60,044
Patient Treatment Fund	9,40,397
PRG	8,01,830
Event-Nativity Waves 2022 (After March)	7,24,740
Kidney Fund	2,30,000
Child Support Foundation	1,50,000
Cuddles Foundation	69,680
Milaap	68,519
Give a Hand	50,000
Volunteer Fee	10,000
TOTAL	2,13,73,068

INKIND (MEDICINE / MEDICAL CONSUMABLES & OTHERS)	
THCF (Oncology Medicines)	1,97,078
TANSACS	39,000
Family Planning Logistic Management Information System	26,000
Other In-Kind Donations (PPE Kit, Mask, Fruits, Dry Fruits, Toys, Nuts, Crayons, Books, Tricycle, White Board Art, Wheel Chair, Groceries, Christmas Cake, Medical Consumables, Paper Advertisement, Hoardings, Flexes, Banners, Media Sponsors (TV & Radio announcement), Photo's & Video's etc..)	12,52,220
TOTAL	15,14,298

GRAND TOTAL	
Grants	2,13,73,068
Projects	94,68,097
Inkind donations	15,14,298
TOTAL	3,23,55,463

Awards and recognitions

- Received Certificate of appreciation from Health Minister for Free TB Services.



- MMHRC received 'Winner of Thinkers of Tomorrow Award' from Team News 18 Network for our Charitable Service.



Activities

- In-kind Donation (PPE Kit) received from Indigo Airlines, Madurai.



- Medical Camp (For HIV Survivors) conducted at Pillor-Nagamalai Pudukottai with the help of YRG Care.



- Medical Camp, Nutrition Session, Wall Painting done at Telemedicine Centre in Ethilodu Village, Dindigul district towards celebration of National Nutrition Day.



- Children Day Celebration at Govt. School, Mettupatti, Nilakottai Taluk.



- Cancer Children Beneficiary Meet Program Conducted along with Cuddles Foundation, Mumbai.



- Honouring Mr. Tim Boyd, International President of Theosophical Society, Chennai.



- Mr. Tim Weab & Mrs. Sarah Weab, UK, witnessed and Distributed Free food scheme to needy patients.



- Students from Singapore University Visited our Hospital and observed charity activities.



Beneficiaries from charity schemes

- 50586 patients have received free food three times a day.
- Free Cleft Lip & Palate Surgeries have been operated for 347 children.
- Free treatment has been given to 493 children with cancer.
- 1093 terminally ill patients have been benefitted from Hospice Service.
- Counseling and HIV testing been done for 659 people with the help of TANSACS (Tamil Nadu State Aids Control Society).
- Free testing and Treatment is been performed for 1324 Tuberculosis patients with the tie up of National Tuberculosis Elimination Program.
- 22496 rural villagers been benefitted through Telemedicine Remedy Consultation.

ACADEMIC



LIBRARY



The library is open from 9 .30 am to 9 pm on working days and 10.00 am to 1.pm on Sundays& Holidays. Our library has access to the digital Library so as to ensure with all relevant information, resources that contains Books, journals website DNB DVD`S, Research papers to suit the local conditions.

DEPT OF LIBRARY 2021-22		
S.No	Details	
I	Books	Quantity
1	Medical Books	4188
2	Management Books	4122
3	Hospital Administration Books	138
4	Miscellaneous Books	431
5	Siddha Books	149
	Total	9028
II	Journals	
1	International Journal [Print + Online]	35 Topics
2	Indian Journal [Print + Online]	48 Topics
III	Cd's [Medical & Management]	1207



MEENAKSHI COLLEGE OF ALLIED HEALTH SCIENCE



About the college

Meenakshi College of Allied Health Sciences was established by Meenakshi mission Hospital & Research Centre in the year 2011, situated in temple city Madurai. MCAHS is affiliated to Dr.MGR Medical University, Chennai. This college was started with ACCIDENT & EMERGENCY CARE TECHNOLOGY course on 2011. Further, we developed this college with two more demanding courses such as MEDICAL LABORATORY TECHNOLOGY and MEDICAL RECORD SCIENCE were commenced on 2013. Later, we shifted our college from Madurai campus to Kottakudi campus on March 2020. Now, we are extraordinarily running our college with 172 students, well experienced faculties, visiting faculties and supporting staffs.

Approved institutions affiliated to

The Tamil Nadu Dr. M.G.R. Medical University and Madurai Kamaraj University.

UG courses offered (4 Years)

- B.Sc. Accident and Emergency Care Technology

- B.Sc. Medical Laboratory Technology
- B.Sc. Medical Records Science

PG Diploma course (1 Year)

- P.G Dip. in Total Quality Management

Infrastructure

Our college have 10 classrooms and 2 seminar halls exclusively for students, in addition to 2 faculty rooms, 3 well-furnished Laboratories (Biochemistry, Microbiology and Pathology), facilitated Computer lab and well stocked library.

Academic section

The academic session for 2022-2023 batches was commenced on October 2022 for the first year students. As per the Ministry of HRD, Government of India, all students were registered undertakings/affidavits regarding anti-ragging and anti-drugs.

Special days

We have celebrated World Health day, Food Safety Day, International Yoga Day, Independence Day, Fire Safety Day, Pooja Celebration, Pongal

Celebration, Republic day, sports day, National science day and International Women's Day.

Academic activities

Medi Lab Techcon 2022 – Programme:

26 Students from Medical Laboratory Technology Department, attended Medical Laboratory Technologist Scientific Conference -2022 which was organised by Medical Lab Technologist Association's on 24th of April 2022 at IMA Hall in Madurai. Lectures were presented on various topics such as Blood Transfusion & Blood Components Therapy, RT PCR- Covid Pandemic with Lab Warriors, AIWO- Recent Advances in Wellness Program and Fungi "Cradle to Graveyard".

State Level Sports Meet for Allied Health science students:

13 students from our college participated in state level sports meet for Allied Health Science students which was conducted at Sri Abirami College of Allied Health Sciences in Coimbatore from 27 April to 29 April 2022. Our students had participated in the events such as khokho, Shuttle cock – singles & doubles.

Graduation Ceremony-2022: We successfully conducted Graduation Ceremony on 30th August 2022 at Conference Hall in MMHRC. Prof. Dr. K. Srinivasan, Formerly Prof. of Neurology, Madurai had graced the occasion as a chief guest and he shared his inspirational thoughts to the gathering. Dr. Ramesh Ardhanari, Medical Director & HOD of Gastroenterology, Dr. B. Kannan Sir, Medical Administrator, Dr. Narendra Nath Jena, Academic Director, Dr.G.Madusuthanan, MLT Course Director & Dr. Dinakaran Daniel, AECT Course

Director have felicitated the function. Totally 68 graduands on various departments such as B.Sc. AECT, B.Sc, MLT & B.Sc, MRS from Dr. M.G.R Medical University and B.B.A Hospital Administration, B.Sc. Applied Biochemistry, B.Sc. Applied Microbiology & B.B.A Hospital Administration from Mother Teresa Women's University were awarded their bachelorate degrees, out of them 2 students got University 1st rank & 2 students got 2nd rank in Mother Teresa Women's University. Respected Chief Guest Prof. Dr. K. Srinivasan, Formerly Prof. of Neurology, Madurai handed over the degrees and special awards of merit to deserving students.

Book Fair Visit: Around 150 students with Faculties & Librarian have visited the Book Fair at Tamukam Ground in Madurai on 29th Sep 2022. They have visited the book stalls & bought some books to develop their knowledge.

LABTECH -2022: Medical Laboratory Technology Students and Faculties from our college attended LABTECH 2022 Conducted by Meenakshi Labs on 8th and 9th October 2022 at conference hall in MMHRC.

MICROFIESTA - 2023: Around 36 students of our college participated in intercollegiate competition organised by American College. Out of 18 colleges, our college students won 4 prizes in various events.

Parents Teachers Meet: We facilitated "Parents - Teachers" meet ensuring healthy discussions on the progress of students' performance and career growth.





MEENAKSHI COLLEGE OF NURSING



Meenakshi College of nursing is a member of MMHRC group of institutions. Under S.R trust, a challenging profession, nursing is dedicated to the service of humanity. The ability to understand and soothe are as important to a nurse's career as expertise in nursing techniques and care. Many of our graduates are well placed in various multispecialty hospitals with in Tamil Nadu and other states of India. Meenakshi College of nursing has left an indelible mark on curricular, co-curricular and extracurricular activities. These ventures help the students to evolve into truly global nursing professionals and citizens.

Academic activities

Undergraduate degree program provides the appropriate foundation for nurses to practice following registration and prepares nurses for ongoing continuing professional development and development of further competencies as appropriate. The undergraduate education process provides nurses with the skills and competencies for modern evidence based health care delivery.

Co-curricular

Students participated in Rally and Mime in World AIDS day program conducted by Government Rajaji Hospital Madurai.

Field visit to orphanage home, blind school, high court, dead diction Centre are done by first year students. Second year students visit slater home, water purification, sewage disposal. Visit of old age home and women destitute home, by our third-year students.

Facilities

- Well-equipped and well-ventilated classrooms with LCD projector.
- Well-furnished and equipped laboratories, excellent hostel accommodation.
- 800 bedded multi – specialty attached parent hospital.
- Indoor/outdoor games and other recreational facilities.
- Safe and comfortable transport for students, CCTV supervision of every classroom.

Skill labs

The below mentioned laboratories are well furnished and equipped with dummies/mannequins/specimens/models/puppets/charts/instruments/bones/advanced type of equipment and other related articles to practice nursing procedures efficiently and have sufficient exposure to hone their basics in nursing services

- Nutrition laboratory.
- Nursing foundation laboratory.
- Community health nursing laboratory.
- MCH laboratory.
- Computer laboratory.
- A.V aids laboratory.
- Advanced simulation laboratory.

Welfare activities

- Students studying in our institution will get 100% placement including our parent hospital, and also in and around the country. Campus interviews are conducted to students by various multispecialty hospitals and reputed organizations in India.
- Students counselling services are being provided.
- Health care services, medical checkup, adherence of vaccination schedule like hepatitis, COVID vaccination etc. for students.
- Student Nurses Association: This association focused the student welfare of academic and in career growth. The student's activities related to all the special days related to health were celebrated.
- In each year the best outgoing students awarded by our honorable Chairman.

Our college committee

- Curriculum committee: The faculty in charge person planned the academic activity in the way off subject allotment to the teaching faculties, arranging the guest lecturers who are specialized in the subject, monthly report collected and it's updated in the curricular calendar.

- Continuing nursing education: The in-charge faculty of the arrange for the journal club activity regarding to present research articles which include advanced nursing care, new technology application in medicine were select from each specialty department which is benefitted in updating of knowledge.
- The other committees are discipline, anti-ragging, youth red cross, and NSS.

The events and students campaign conducted in the year includes the following:

- World health day
- International Nurses day
- World breast feeding week
- World mental health day
- World AIDS day
- Pongal celebration
- Orientation Program
- Sports day
- World TB day
- Pulse polio campaign-2022
- Disability camp -2022
- Mega Covid-19 vaccination camp
- International women's day

Proud of our students' achievements

- Number students scored distinction in the examination Conducted by of The Tamil Nadu Dr. MGR medical university.
- Our students Ms. Subhashini and Ms. Deepadharshini won the third placement in tuberculosis awareness program conducted by the District TB office.
- Intercollege psychiatric quiz competition conducted by Athma psychiatric hospital, Trichy.
- Our students Ms. Vibinsha, and Ms. Mercy received the award of Runner.
- Women marathon (160 nos) received memento for large group of participation conducted by Aishwaryam trust.



Awards and publications

Prof. Dr. Induja

1. Resource person on awareness program communicable disease organized by Tamil Nadu Nurses and Midwives council.
2. Resource person on panel discussion on envisioning equitable digital future reaching new heights: a women's perspective organized by GINRA foundation Mumbai.
3. Paper presentation of behavioral addiction & substance use disorder current nursing practice – Ministry of health and family welfare Govt of India.

4. Paper publication on attitude changes among the nursing college students after the Covid19 pandemic lockdown in international journal of nursing science practice and research.
5. Prof. Dr. Induja, Mrs. Sivappriyaa, Professor - Paper publication on assessment of challenges of nurses during covid 19 pandemic in selected hospitals at Madurai International journal for current science.
6. Mrs. Shanmugapriya received certificate in TNNMC for the lesson plan online course.
7. Mr. Suresh received the award of excellence from district health and family welfare department for the COVID vaccination maximum number of coverage population with the participation of students.

Future plan

- Conducting CNE with the collaboration of Tamil Nadu Nurses and Midwives council.
- Other institutional visit for the completion of nursing management and administration by final year students (Gandhi Gram University, Dindigul/ Government Rajaji Hospital Madurai).



Our Charitable **ACHIEVEMENTS** so far

- Free food provided more than 4.73 lakh poor inpatients.
- So far 5,54,718 number of patients have received free medicines.
- Blindness prevention treatment through Medicine distribution to more than 1.60 crore children.
- More than 2,51,148 blood units distributed at free of cost.
- Free HIV counseling and testing done for more than 27,745 persons.
- Free Cleft lip / Palate surgeries performed for nearing 13,613 patients.
- Free Tuberculosis Testing for more than 23,368 patients.
- More than 7,173 free medicals camps were conducted in rural areas.
- Telemedicine services provided for more than 2,62,000 patients.
- 186 surgeries performed for children with cardiac ailments.
- 4,586 children availed medical intervention for cancer & other blood disorders with the assistance from the Hospital and Government.
- Hospice Care been given for more than 3,104 patients at subsidized cost.
- Palliative Care service for more than 12,646 patients.
- Lysosomal storage disorder (LSD) - Rare Disease project. Total no. of Beneficiaries - 48.



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YEARS

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