



KMCH Touch

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QUARTERLY NEWS JOURNAL OF KOVAI MEDICAL CENTER AND HOSPITAL

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In Book Release Inaugural Function*

UPCOMING EVENTS

KMCH Liver Series 4
23rd & 24th September 2017

KMCH Partial Knee Course
01st October 2017

**Thoracoscopy And Pleural
Insights & Guide -
TAPING 2017**
29th October 2017

A Man Living with 2 Hearts was made Possible at KMCH



Chairman's Desk



Wish you all Happy Ayutha Pooja & Diwali!

Once again KMCH did a major beat in cardiac surgery. Asia's first Heterotopic Heart Transplant happened at KMCH. Great job! Congratulations Dr. Prashant Vaijyanath and team.

We have to keep up with technology to give precision treatments to our patients. The addition of spectral CT, gives many advantages to our patients. Minimal radiation exposure, less quantity of contrast media, cardiac CT. at any heart rate without Beta blockers, accurate pulmonary pathology, neurovascular scans with biometric methods, whole body scan within minutes are many of the improvements in this new scan machine. Second MRI will have more diagnostic modalities including finding accurate fetal anomalies. MRI fibrous scan of the Liver is the greatest advantage in this new scan. Supersonic Ultrasound machines are going to help our Fetal Medicine Department. By these newer additions, we will have

updated hospital health care delivery system.

Recently we held conferences on Endometrium and Nuclear Medicine. World Rhenium Conference and Nuclear Medicine Conclave were held in the month of August and they were attended by many international faculties and delegates. Sri Lankan Health Minister attended the conference. Congratulations Dr. Ajit Shinto and team for the excellent arrangements and for the success of the conference.

We are now eligible for setting up of a medical college. All preliminary works are happening and will finalize all the arrangements very soon.

All the hospital functions are going well and we should thank our medical and paediatric departments for their excellent work of handling hundreds of Dengue cases and other viral fevers. ICU team helped them with so many complications of their cases. We are all proud of their works.

With best regards,

Dr. Nalla G Palaniswami

Chairman & Managing Director

Editorial Board



“A simple act of kindness is more rewarding than a thousand heads bowed in prayer”

Warm Greetings from the Editorial Desk. It is great to be in touch with you all with this edition of *KMCH Touch*

Innovation and making the impossible, possible is just not a “Cliché” at KMCH. We mean every single word of this mission statement. We are really proud of having done Asia’s First Heterotopic heart transplant under the guidance of Dr. Prasanth Vijayanath and highly skilled cardiac and renal team. Chairman deserves all credit giving the platform for experts to push boundaries that translates to life changing treatments for our patients.

We have interesting snippets of information in this issue of KMCH Touch. We have raised cancer awareness by a simple yet superb QA template. The Mock Drill went smoothly and created great awareness not only among the Emergency handlers but also the General Public. We have other interesting articles on various areas of Medicine & Surgery.

We hope you enjoy this issue. As before, we are always grateful for any feedback.

Kindly mail us drkrishnanswaminathan@kmchhospitals.com

Book on Keyhole Spine Surgery Released - KMCH a Forerunner in Minimal Access Spinal Surgery

Dr. J.K.B.C. Parthiban, Consultant Neuro Surgeon



KMCH Chairman Dr Nalla G Palaniswami, KMCH Directors, Dr. Mohan S Gounder and Dr. Arun N Palaniswami Former Test Cricketer Mr. M. Venkataramana, Dean Dr. Kumaran.V Dr.J.K.B.C. Parthiban and Neuro Spinal Surgeon Prof P. S.Ramani



KMCH Chairman Dr Nalla G Palaniswami, addressing the gathering.

A scientific book on keyhole surgery on Lumbar Disc Prolapse authored by Senior Consultant Neurosurgeon Dr.J.K.B.C. Parthiban was released by Dr Nalla G Palaniswami, Chairman, KMCH. Dr Parthiban is the Founder President of Tamilnadu and Pondicherry Association of Neurosurgeons and a senior Consultant at KMCH. With his vast experience in spinal surgery he has penned down the much demanding spinal surgery book among young neurosurgeons and spinal surgeons.

The book 'Neuro Spinal Surgery Operative Techniques - Micro Lumbar Discectomy' elaborates surgical details of ultra specific steps in preserving nerve roots and spine movements while removing the disc prolapse in lumbar spine. Till date no such book was dedicated to this technique by any Indian Spinal Surgeon. The book will be now a hall mark in Indian spinal surgery and really a boon to all young neuro and spinal surgeons.

At KMCH, Dr Nalla G Palaniswami always gives special importance to research and publications that helps the entire community. He highlighted that the ultra modern facilities available for advanced spinal surgery including world class microscopes and navigation systems helps the surgeons to bring out the best at KMCH.

The Chief Guest and Renowned Neuro spinal surgeon Prof P.S.Ramani received the first copy of the book and dedicated on his name. The book explains the development of spinal surgery in India and appreciates the lead role taken by KMCH in this field under the leadership of Dr Parthiban.

Former test player & Star Leg Spinner of Indian Cricket and also the BCCI special awardee of this year Mr Vaman V Kumar was the special guest and addressed the audience in large, like first class cricketers, neurosurgeons, spinal surgeons, Rotarians, Entrepreneurs and many others who had undergone spinal surgery.

He said that Dr.Parthiban is living example of how a sports person can become an excellent surgeon. A set of spinal surgery books has been donated to the libraries of department of neurosurgery of three major neurosurgical centers - Coimbatore Medical College, Madurai Medical College, PSG medical college and KMCH.

Robotic Surgery - The 'Gold standard Cure' for Prostate Cancer if Diagnosed Early

Dr. M. Anandan , MS., M.Ch.(Uro)., Fellowship in Minimally Invasive Urology (Robotic Surgery)

Prostate cancer is the second most common solid organ cancer affecting the males, world wide. Cure is a definite possibility if it is diagnosed early. However, in this part of the world, it is often diagnosed, if at all, in the late stages, where it has spread beyond the prostate. The situation was not so different till recently, even in the western world. Two discoveries changed the whole scenario in the management of cancer prostate. The first is the discovery of PSA (Prostate specific antigen), which is a protein produced by the prostate, and mixes into the blood stream. It is increased in patients with carcinoma prostate. The main drawback with respect to the diagnosis of cancer prostate is that patients do not have significant symptoms related to the disease in the early stages. They might have difficulty in passing urine, increased frequency of urination and blood in the urine; symptoms which are usually seen when the growth has increased considerably in size. Moreover such symptoms are also seen in non cancerous enlargement of prostate too. Cancer is usually suspected by the urologist while examining the patient. Only 15 – 20 % of the patients can be diagnosed in the early stages with clinical examination. However, PSA is increased in the early stages of the disease, even in those with no symptoms.

Hence all males more than 50 yrs age should get their blood PSA checked and needs further evaluation if it is more than 4ng/ml and regular follow up if it is more than 2.5ng /ml. The second discovery or invention which revolutionised prostate cancer management is the Surgical Robot (da Vinci). Since the prostate gland is situated deep in the abdomen, within the bony pelvis, even open surgery was very difficult. Moreover fine nerves which helped in urine control and maintaining erection were situated close to the sides of the prostate. Damage caused to them during the procedure caused incontinence and erectile dysfunction in many patients. Precise control of blood vessels was also difficult. Hence many patients were given options of just hormonal management with or without radiotherapy. This scenario has completely changed with the advent of Robot.

The da Vinci Surgical robot, available in KMCH, provides excellent magnified vision for the surgeon. This helps in identifying the nerves and blood vessels clearly and helps to improve the urinary continence rates. More than 90 – 95% of the patients have satisfactory urine control with Robotic Surgery, which may not be the case with open surgery. The suturing within the deep parts of the abdomen and pelvis is comparatively easily done with robotic instruments. Pain after the procedure is considerably less compared to open surgery, since the surgery is done through few small holes. Though the urologist sitting behind the robot matters the most, our job is better done with the help of the Robot.

The magnitude of the impact of robotic approach to radical prostatectomy could be gauged from the fact that, in the US, the number of prostatectomies increased more than 50% between 2000 to 2010. Moreover, more than 70% of all radical prostatectomies are done robotically nowadays. In our country, most of the prostate cancer surgeries are done only in institutes where robot is available. KMCH is the only hospital in coimbatore and western tamilnadu where robotic radical prostatectomy is done. We also do other urological procedures like radical cystectomy (removal of the urinary bladder and reconstructing the urinary tract for bladder cancer), removal of part of kidney for kidney cancer, reconstructing the urinary tract (pyeloplasty, ureteric reimplantation). Removal of lymphnodes for penis and testis cancers can be performed through small incisions with precision. Even kidney transplantation is done with robot, through small incisions.

The important messages are 1) Early diagnosis is essential – before developing symptoms 2) Blood PSA testing is essential for early diagnosis – All patients above 50 yrs need to get it done 3) Prostate cancer is a curable disease - not just controllable 4) No need to remove testes if prostate could be removed completely 5) Robotic approach is fast becoming the gold standard for radical prostatectomy 6) Combined approach with surgery and radiotherapy is preferred for advanced disease.

A Mock Drill (Code Yellow) - Coimbatore International Airport & KMCH



Victims been taken care by active participants at Mock Drill



KMCH & Air force team during Mock Drill

A Full Scale Emergency Mock Exercise was organized by Airports Authority of India in collaboration with KMCH and other stake holders, to examine the procedure for efficiency of emergency response during aircraft emergency situations. The mock drill conducted inside the airport premises on 20.06.2017, Tuesday at 03:30 PM. As per DGCA (Direct General of Civil Aviation) requirements, all Licensed Airports have to carry out Full Scale Emergency Mock Drill once in every 2 years. The Drill is part of preparedness in case of an Aircraft accident and the actions thereof involves Airports Authority of India, Airlines, State Administration, Kovai Medical Center and Hospital(Hospitals), State Police department, State Fire & Rescue Service, 108 Ambulance and other stake holders / agencies associated with aircraft movements. Precautionary arrangements were made by Airport authority to handle such emergency landing.

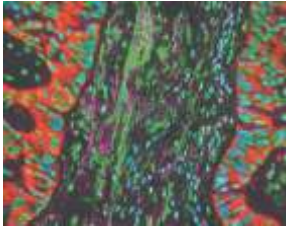
Having conducted a Full-Scale Emergency Mock Exercise – along with a detailed plan of action and created situations in realistic way, more than 75 volunteers performed as victims & Aircraft crew members. Fire department, Hospital employees and Police department all together around 200 members performed with realistic make up on serious injuries. This was a kind of “MAKE BELIVE EMERGENCY – SITUATION”

Fire tenders and 10 ambulances reached the made-up crash site one by one within two minutes since the “Mayday Call” was recorded at Airport and “Code yellow” was activated at KMCH Hospital. Injuries were divided into three types. Type I injury (Severe head injury, carotid artery cut, amputations & burns 40%) was life threatening which needed immediate attention were identified by KMCH hospital medical & paramedical staff and shifted the Victims to KMCH emergency within 10 minutes time, then type two injuries which needed to be shifted in 15 – 20 minutes time (major fractures & burns up to 20 -30%) also been taken to KMCH hospital and rest of the Mock Victims are third type with mild fractures and abrasions were given first aid at airport first-aid center, officials added.

“The full scale emergency drill is an exercise to check our readiness on real time situation. We are committed to the safety and well-being of our passengers and we consistently strive to incorporate and upgrade the best of world class safety measures,” said the Airport Director, Shri. R. Mahalingam, Coimbatore International Airport. He appreciated other stakeholders who participated in the drill including Spice Jet Airways, Customs, Immigration, Coimbatore police, Fire safety, KMCH hospitals and the security personnel. As per NABH standards protocol, once in every six months KMCH use to conduct Code Yellow (Disaster), Code Red (fire) & Code pink (infant abduction) mock drills towards enhancing the efficacy in emergency handling. Such kind of emergency training would be a great exposure to our staff members which will enhance their technical skills and balance their emotional intelligence on such situations said Dr.Thavamani D.Palaniswami Vice Chairman - KMCH.

Everything about Cancer that you wanted to know but were afraid to Ask

Dr. Bharath Rangarajan, Consultant Oncologist at KMCH



What is Cancer?

Cancer is a common name for a large group of diseases. This Disease group involves formation of abnormal cells in our body.

How many different Types of Cancer are there?

There are Many Hundred types of cancers that can occur in human beings. Cancer can happen in ANY PART OF OUR BODY Eg: Brain, Bone, Lung, Kidney .etc. Furthermore there can be many different types of cancer in each organ in our body. For example here can be more than 25 different types/subtypes of cancer in the brain which may all be called "Brain tumor"

Why is Biopsy done? Does it Cause Cancer to spread?

Biopsy tells us the Type/Subtype of cancer. Biopsy is recommended in most cancer subtypes. The correct treatment can be given only if the correct type of cancer is known. A well done Biopsy by a qualified doctor DOES NOT cause the cancer to spread. In rare instances/special situations where biopsy is to be avoided, your doctor will advise you appropriately.

What causes Cancer/Formation of abnormal cells?

Tobacco - Smoking beedis/Cigarettes/ Gutkha/Tobacco leaf /Snuff powder and all other forms of Tobacco is the commonest cause of cancer. Some Viral Infections - Hepatitis B, Human Papilloma Virus can also cause some cancer in few people. Both these Virus infection are preventable with Vaccination. There are many other causes which include Alcohol consumption, High fat intake in diet, over exposure to UV rays from sun, Exposure to Radiation, Exposure to certain chemicals, and Air pollution etc., However the cause of cancer may not be clear or easily identifiable in many patients.

Is Cancer Hereditary?

Hereditary cancer is rare and is seen only in about 10% or less patients with cancer. These Cancers can be identified with special tests and the risk of these cancers in the relatives/next generation can be identified with these blood tests.

What is the difference between Cancer cell and Normal cell?

Normal cells in our body have a definite life span and die after certain time. They are then replaced by new healthy normal cells

Cancer cells are derived from normal cells in our body. However they are different from normal cells in many ways

- They divide continuously/ininitely – Forms a tumor.
- The cancer cells do not die out naturally.
- The cancer cells can invade into nearby organs.
- The cancer cells can spread through blood stream/lymph vessels to any part of the body.

Is there any age group for cancer?

Cancer can occur at any age - New born babies to any age. However Cancer is more common in older people with increase in cancer seen after 60-65 years of age. This is because our normal cells have a higher chance of turning into abnormal cancer cells due to various reasons as we grow older.

Are there any early signs of Cancer?

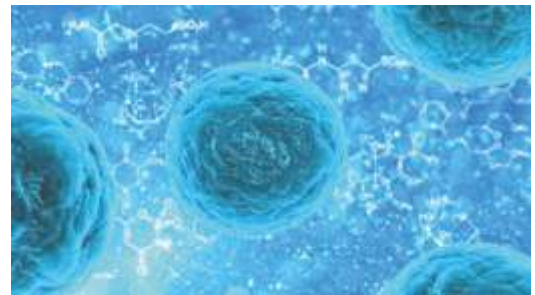
Yes there are some. Although these are not always seen or always accurate, we still must be aware of these symptoms and see the Doctor for any of the below symptoms.

- Painless Lump – Breast/ Neck/Armpits/Groin area/other parts of body. Please remember that early cancer is usually painless
- Unexplained anemia – Low Hemoglobin
- Unexplained weight loss/Rarely sudden or unexplained weight gain
- Wound that does not heal – Skin over any part of the body/inside our mouth.
- Sudden increase in size of existing swelling or a non healing wound/color change that happens over already existing swelling or mole
- Unexplained bleeding – Blood in sputum on coughing, Vomiting with blood, Excess bleeding during menstruation/ Bleeding in between menstrual cycles of after sexual intercourse, Blood in urine, Blood in stools or black stools
- Unexplained loss of appetite

How is Cancer treated? Is it same for all patients?

Cancer is treated according to type/subtype of cancer

- Organ involved
- Stage(depends on the extent of spread in the body)
- General health status of the patient
- Other medical factor assessed by the treating doctors



It is NOT same for all patients. You have to discuss with your Doctor regarding appropriate treatment for each patient.

What are the different Types of cancer treatment?

The common treatment methods include:

- Chemotherapy/ Hormone therapy/ Immunotherapy/Targeted therapy.
- Surgery
- Radiotherapy

Other treatment options like Radionuclide therapy/ Radiofrequency ablation etc.,

Will I/My relative tolerate Chemotherapy?

Chemotherapy/Hormone therapy/Targeted therapy are very specialized treatment modalities and have to be delivered only by qualified Medical Oncologist who is trained and well versed in this highly specialized area of cancer treatment. The Medical Oncologist will make sure that the treatment is appropriate and will have maximum benefit in terms of cancer control and will also take care to prevent most side effects /treat the side effects to make sure you /your relative tolerates the treatment well.

Is cancer Curable?

Cancer is curable if detected early and treated appropriately. Cancer treatment requires team work and team should include Medical Oncologist, Oncologic Surgeon, Radiotherapist, Pathologist and other paramedical staff. Advanced cancer/cancer that has spread widely in the body may not be curable, but your Medical Oncologist can still provide you with control of disease and good quality of life with appropriate Chemotherapy/ Targeted therapy. We, at KMCH are able to provide comprehensive cancer care and end to end services from diagnostics(Pathology / Radiology / PET CT) to therapeutics (Chemotherapy / Targeted Therapy / Immunotherapy / Radiation / Cancer surgery/ Radionuclide therapy/ Bone marrow transplant) on par with any International Cancer Center.

KMCH LIVER SERIES - 3 “Viral Hepatitis... Made Simple...”

Dr. S. Vivekanandan, MBBS., MRCS., FRCS., & **Dr. Rajeev R.Sinha**, MS., MD., FACS.,



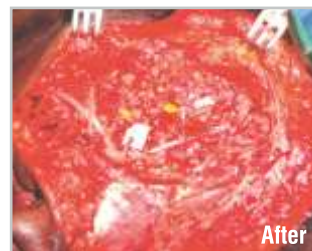
*Dr.S.Vivekanandan - Head - Hepatobiliary & Liver Transplant Unit,
Delivering a speech at Liver Series 3*

The KMCH Liver clinic has stepped into the preventive measures in educating the people by organizing a seminar on - Hepatitis. The clinicians of KMCH liver institute not only focus on treating liver related diseases and transplantation of liver but also closely get involved in doing awareness program on preventive and detection of Hepatitis Viruses in the public.

This is the 3rd series of the KMCH, Liver Series focusing this time on hepatitis virus which is more dangerous than HIV, TB or Malaria. Through this initiative the KMCH Liver Institute has decided to impart the specialized knowledge to practicing Clinicians and General Surgeons at large. This Hepatitis Virus disease has

affected almost 5 crore people in our country. 150 Physicians and General surgeons from across Tamil Nadu participated in the workshop where various special, specific techniques and preventive measures were taught by experts during the course said Dr. S. Vivekanandan, Head of KMCH Liver Institute. Dr. Arun N Palaniswamy, Director, KMCH addressed the gathering and gave assurance that KMCH will continuously educate the General public and Medical team about the importance of Preventive and Corrective Measures in handling HEPATITIS Viruses. He also then appreciated the KMCH Liver Institute Team Dr.S.Vivekanandan Head of KMCH Liver Institute & Dr. Rajeev Sinha for having initiated this meaningful platform for the Consultants across the Nation to interact. Further Dr. Arun Palaniswami, emphasized that, KMCH as an institution always focused on educating upcoming talents by way of organizing this kind of regular series and clinical sessions. Dr.Kumaran.V. Dean, KMCH and Dr. Murugan .A.N Medical Director KMCH appreciated the initiative taken by the Liver Team. More than 150 Doctors participated in this meet.

A Case Study - Dr. M. Dhiwahr, Consultant ENT, Head & Neck Surgeon



A team of doctors led by Dr. M. Dhiwahr, consultant ENT – head and neck surgeon at KMCH, Coimbatore, have reported a new technique for removing neck tumors. Surgery for parotid gland tumors that occur high in the neck is challenging because the tumor may lie deep to the facial nerve that moves the face. Fearing injury to this important nerve, surgeons may leave some tumor close to the nerve, which often results in re-growth of the tumor. Based on their experience of treating more than 100 of these difficult tumors, Dhiwahr et al report that one specific branch of the nerve can be safely sacrificed without affecting facial movement in any way. This would pave the way for complete removal of even deep and large tumors.

Asia's First Heterotopic Heart Transplant



***Dr Nalla G Palaniswami, Chairman, KMCH
along with our cardiac team***



***Dr Prasanth Vajjyanath with the patient who is
"Living With Two Hearts"***

Dr. Prasanth Vajjyanath, Consultant Cardio Thoracic Surgeon, Dr. Thomas Alexander, Dr. Suresh Kumar and Dr. Vivek Pathak and their team have successfully done Asia's First Heterotopic Heart transplantation at KMCH, Kovai.

Dr. Prasanth Vajjyanath, Consultant Cardio Thoracic Surgeon told that the transplant was done on beating heart using the Direct Pulmonary Artery Anastomosis technique on May 30, 2017 at KMCH, Coimbatore. Mr. Vignesh (name changed) a 45-year-old man had to undergo this transplant procedure because of the high lung pressure, which did not enable him to undergo a normal heart transplant. Calling it as a 'hard and demanding surgery', the doctor stated that the patient's own heart (native heart) was only 10 percent operative. The doctor also said that he felt like destiny when the patient received the heart of a female donor which was smaller in size and was a perfect fit in the cavity.

Dr. Prasanth Vajjyanath added that this operation is also genetically fascinating because, now the man will not only have the XY chromosome that all men have, but also will have the XX chromosome of a woman within him. Explaining the functioning of the two hearts, the doctor said, "There are five connections between the two hearts".

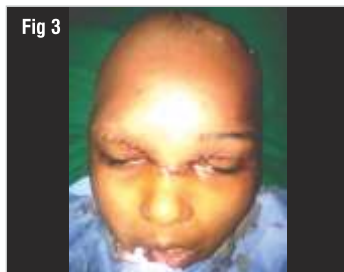
Two connections are meant to take in the pure blood while three are to take the impure blood out. The two connections placed between the left atriums of the two hearts is what makes sure that blood can be shared. On the right-hand side, doctors have connected the Superior Vena Cava, Inferior Vena Cava and the Pulmonary Artery. Connecting them with the beating heart was the hardest task and that makes this operation very challenging".

While most of doctors in abroad connected the pulmonary arteries of the two hearts using an artificial connector, but here at KMCH, in Mr. Vignesh's case, the arteries have been connected directly to the beating heart. The doctor also revealed that the weight, blood group and the age of the donor was similar to that of the recipient, stating that such details are often compared and analyzed before any heart transplant is done. It is a fact that only four centers in the world have the facilities and experts to perform this transplant, the doctor proudly declared that this was Asia's first case of Heterotopic Heart Transplant which has been done at Cardiac Department, KMCH, Coimbatore.

He further added that this innovative Pulmonary Artery Anastomosis technique would be published in the International Journal of Heart and Transplantation. KMCH is now adding a gem to its crown rather a feather. KMCH's Chairman Dr. Nalla G. Palaniswamy proudly says that, KMCH is being a pioneer in adopting to latest techniques and innovations in Super Speciality treatments. Human lives are going to be greatly benefited with this kind of treatments.

Scalp Revascularisation : A Case Report

Dr Senthil Kumar C , MS., MRCS(ED)., MCH (PLASTIC SURGERY)., Consultant Plastic & Microsurgery, KMCH Sullur



Introduction: Work place injuries are at a soaring rate in India, owing to poor implementation of precautionary measures and over work fatigue among workers. We present one such a case which was managed effectively with the microsurgical work.

Case Report: A 28 yrs old lady, mill worker by occupation, was brought to the emergency with the total degloving of scalp due to long hair getting caught in a machine. On examination, she was drowsy but arousable.. Vitals were stable and neurologically normal. The degloving was extending (fig 1) from the just below the eyebrows, both sides anterior upto to the neck and just above the level of pinna laterally. The plane of degloving was subaponeurotic layer. Major part of the degloved scalp were crushed in the machine (which was not brought with patient initially) ,the frontal and anterior scalp part had a small tag of skin still attached. Patient was resuscitated with crystalloids and blood. After ruling out head injury, patient was immediately shifted to the Operation theatre.

Microsurgical Managent: Under GA, Patient in supine, wound wash was given thoroughly. The attached part of scalp was examined. Both the superficial temporal arteries (STA) were avulsed, the degloved part showed no vascularity. The major part which was badly crushed could not be used. Under microscope the anterior flap was dissected for vessels, right STA and RT frontal branch of STA were anastomosed (fig 2) using ethilon 9.0. The rest of the area had to be skin grafted.

Post OP: The flap was monitored at a regular basis. The flap and the graft settled well (fig 3) with 100% graft survival.

Conclusion: Not only the extent of the injury, but also the availability of modern equipment's and skills that dictates the final outcome (fig 4). Microsurgery is the cherry on the cake for the field of Reconstructive Surgery. More awareness and precautions should be made mandatory to deter such incidents from happening.

Ketogenic Diet for Epilepsy and more.....

Dr.Sujatha Chinnappan, *MRCPC (UK), DCH (UK)*.

Epilepsy is a chronic neurological disorder with 1% prevalence in our population, higher in the rural (1.9%) compared to urban population (0.6%). Although 70-80% of the patients with epilepsy can be controlled with medications, 20 to 30 % are left with intractable /drug resistant epilepsy (defined as seizures despite 2 appropriate/adequate doses of anti-epileptics for adequate duration). Options for intractable epilepsy are epilepsy surgery, vagal nerve stimulation and ketogenic diet. Ketogenic diet was the treatment of choice for epilepsy but after emergence of drugs in 1950, it slowly faded. It was rediscovered by an American parent for his child with intractable epilepsy, after excellent response, started Charlie's foundation Charity to create awareness about ketogenic diet in epilepsy.

What is Ketogenic diet?

It is a high fat, low carbohydrate diet with adequate protein. It has to be prescribed by the doctor who has been trained to do so along with a dietician. Those who are on the diet needs regular follow up at least once a month for growth monitoring, alteration of the diet and monitoring for any side effects.

How it works in epilepsy and is there scientific evidence for its efficacy?

Although exact mechanism is not clear but plausible theory is of diet balancing neurotransmitters. A Cochrane review in 2016 for ketogenic diet in epilepsy postulated that 85% patients have seizure reduction and 55% become seizure free within 3 months of starting the treatment.

How long do we need to give the diet?

Initially a trial period of 3 months and if responding, continue for a period of 2-3 years with evidence pointing to good remission on stopping after that period.

Side effects of Ketogenic Diet : *Short term:* Initially nausea, vomiting, lethargy which gets better with time. There is risk of constipation due to the reduction in fibre but responds well to simple laxatives. *Long term:* Constipation; high lipid levels (we use mixture of fats in the diet mainly ones with low fat ratio and with regular monitoring of fasting lipid profile, the risk is mitigated); nutritional deficiency (due to the restriction of fruits and vegetables that can be alleviated by vitamin and mineral supplement); renal stone due to ketonuria (can be reduced by adding regular alkalizing agent). Most of the side effects are easily managed by regular follow up by Ketogenic diet team.

Ketogenic Diet in KMCH for children with intractable epilepsy : Ketogenic diet has been successfully used in 3 of my patients with intractable epilepsy and many patients have been counselled for starting it.

Case 1: 4 year old child with genetic epilepsy on 5 anti-epileptics, having 2 types of seizures (myoclonic and tonic seizures). After 4 months of ketogenic diet, myoclonic seizures settled nearly completely along with reduction in tonic seizures despite reducing to 3 anti-epileptics from 5. **Case 2:** 3 yr. old child with infantile spasm and hyperactive behaviour with abnormal MRI brain (thin corpus callosum, periventricular hyper intensities) presented with no medications after experience of none of the medications working but causing side effects. Child was started on Modified Atkins diet, a form of ketogenic diet and within few weeks, there was more than 50% reduction in seizures with improvement in hyperactive behaviour. **Case 3:** 2 ½ year old child with hypoglycaemic insult in neonatal period with West syndrome. Despite being on medications had daily seizures of 2 types. After few weeks of commencing ketogenic diet, seizures reduced more than 50 % and started making excellent developmental progress. Other uses of ketogenic diet: At present ketogenic diet is being used in many neurological disorders like tumours, autism, Parkinson's etc. Once we have more evidence we will start ketogenic diet for the above patients with above problems in KMCH. **Conclusion:** Ketogenic diet is a form of diet therapy which does work in more than 60% of patients with intractable epilepsy (> 50 % reduction in seizures and 30% chance to be seizure free) along with a potential in other neurological disorders.

Sudanese Boy Relieved of Complex Brain Tumour - State of the art Neurosurgery at KMCH



KMCH Chairman Dr.Nalla.G.Palaniswami with Dr.J.K.B.C. Parthiban (Left side), Dr.V.Arulselvan (Right) with patient Master.Mohamed Omer Mohamed Ahmed and his parents from Sudan.

Just few days before the World Brain tumour day , Dr.J.K.B.C. Parthiban, Senior Neurosurgeon, KMCH removed a complex tumour in the brain of ten year old boy from Sudan successfully. Brain tumours in children are complex and can pose great threat to their life if not diagnosed and treated at right time. However it needs competent neurosurgeons and state of the art technology to achieve successful removal of these challenging brain tumours.

Master Mohammed Omer was referred for tertiary care from Oman to KMCH. Dr Arul Selvan, Neurologist analysed the young boy who suffered from excruciating pain on the left side of the face that disturbed the child severely and prevented him from attending

school. Investigation showed a deep seated tumour in the medial temporal lobe (Deeper Brain) close to vital structures and nerves that supply sensation to face. He also said that the pain was lancinating and tingling on left side of the face but the child had no other neurological deficits and was stable. Subsequently the Neuroscience division decided to remove the tumour under the guidance of Dr.JKBC.Parthiban , who is also currently the President of Tamilnadu and Pondicherry Association of Neurosurgeons.

In a four hour high intense Microsurgery the brain tumour was removed totally using Fluorescence dye optical visualisation and the cutting edge instrument CUSA (Cavitron Ultrasound Suction Aspirator). Dr Parthiban explained that the Fluorescence dye that get incorporated at tumour tissues helps in differentiating the tumour tissue from normal brain , CUSA helps in removing the cancer cells without disturbing normal tissue layer by layer. The young boy recovered from pain got ready for discharge five days from surgery in a stable and healthy condition.

While greeting Mohammed Omer on his discharge date, Chairman Dr Nalla G Palaniswami said, Coimbatore has now become one of the preferred medical destination for patients from abroad particularly from Africa and Middle East countries.

Congratulations

An Article : Not for the Last Time that I do something for the First Time: A Time to Padhy! Step towards Warmth Rhenium Project.

in

World Journal of Nuclear Medicine/Vol 14/Issue 3/September 2015

An Article : Important Clinical Applications of Rhenium for Radionuclide Therapy

in

International Journal of Nuclear Medicine Research, Special Issue, May-2017

by

Dr. Ajit Shinto

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Blood Irradiation Chamber - “A New Milestone”

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A Blood transfusion is a common procedure, considered relatively safe and done to replace blood lost during surgery or due to a serious injury. A transfusion also may be done if your body can't make blood properly because of an illness. Most blood transfusions go well. Mild complications can occur. Very rarely, serious problems develop.

One of the very serious problem is transfusion associated graft versus host disease (TA-GVHD). Transfused cellular blood products have viable lymphocytes and these are usually identified as foreign and destroyed by the recipients immune system. However, in situations where the recipient is immunocompromised like new born with incompletely developed immune system, inherited or acquired immunodeficiency or malignancy, the transfused T lymphocytes escape and multiply in the recipient. They, then recognize the recipient lymphoid tissue as foreign and attack them resulting in TA GVHD

Patient Groups at Risk of Transfusion -Associated Graft -Versus Host Disease (TA-GVHD)	
1	Congenital immune-deficiency disorders
2	Hodgkin's disease
3	Neonates with erythroblastosis fetalis
4	Recipients of intrauterine Transfusions
5	Recipients of stem cell transplants
6	Recipients of blood components donated by relatives
7	Recipient -donor pairs from genetically homogeneous populations
8	Recipients of HLA-matched cellular products*
9	Premature neonates
10	Liver Transplants, Renal Transplants

Patients possibly at risk	
1	Non-Hodgkin's B cell lymphomas
2	Solid Tumors

Potential at-risk group	
1	Full term neonates
2	Patients receiving immunosuppressive medication

*HLA-Human Leukocyte antigen

In addition, TA-GVHD has also been reported in non-immunocompromised hosts, particularly pregnant women, people receiving transfusion from close relatives, people undergoing cardiovascular and abdominal surgery, patients with active rheumatoid arthritis, and trauma cases.

Clearly not all immune-compromised individuals develop TA-GVHD and there must be additional risk factors predisposing patients to this condition. The main requirements for the development of GVHD are: shared HLA types between the recipient and donor but with other differences that will make the donor recognize the recipient as foreign, the presence of immunocompetent cells in the transfused blood components, and inability of the host to reject the immunocompetent donor lymphocytes. In a normal recipient, immune cells will far outnumber donor-derived T cells, which are therefore eliminated by a host-versus-graft reaction. However, if a small number of functional T lymphocytes are transfused which derive from a donor who is homozygous for one of the recipient's HLA haplotypes, the recipient will not recognize these cells as foreign. The donor T cells will, however, recognize the host as foreign, undergo clonal expansion and establish TA-GVHD. This situation is referred to as a one-way HLA match and TA-GVHD may be expected to occur regardless of the host immune status.

TA-GVHD is typically evident from 8-10 days post transfusion. The clinical syndrome includes fever, diarrhea, abnormal liver function tests, bone marrow failure with secondary pancytopenia and a characteristic rash particularly affecting the palms. Unfortunately the features are not substantially different from those of a variety of viral illnesses or drug reactions. Comorbid conditions may obscure the clinical features of TA-GVHD, particularly if the clinician has a low index of suspicion. Cases are most certainly underreported because of lack of recognition or the absence of definitive diagnostic studies in many cases.

There is no effective treatment and it is almost uniformly fatal, with death occurring within 1 month in over 90% of cases. The irradiation of cellular blood components renders the donor lymphocytes non-viable and protects the recipient from potentially developing TA-GVHD. This is the only effective way to prevent this deadly complication of blood transfusion.

KMCH is the first corporate Hospital in TamilNadu with a dedicated stand-alone state of the art Blood Irradiator (BI-2000), to ensure safe transfusion practice in this region and offer the service to one and all.

This BI-2000 unit is a self Shielded dedicated Blood Irradiator Unit designed and developed by BRIT (Board of Radioisotope and Technology, Government of India). Caesium -137 is the radioactive Isotope involved which emits gamma radiation of 0.662 MeV. It delivers the required 25 Gray of Radiation in 151 seconds.



KMCH Events & Camp Photos:



KMCH Chairman Dr Nalla G Palaniswami delivering his speech during "Infection Prevention Week 2017"



Awareness programme by students at Brooke Fields Mall on "Autism Day"



Srilanka North Province Chief Minister Mr.C.V. Vigneswaran with Mr.Narayanan, Dr.Ganesh Veerasekar, Dr.Ajit Shinto and Dr.Vignesh Kandhakumar



KMCH Team with Srilankan's Doctors at Jaffna



KMCH MVT Team interacting with visitors at MED EXPO - Dhaka, Bangladesh 2017

KMCH Events & Camp Photos:



KMCH Doctors at IMA meet - Salem



KMCH Team at Ottanchathiram Camp



School kids congratulating doctor's on Doctor's Day Event - 1st July 2017



Dr. Kulanthaivelu - Thangam Hospital along with Dr. Vivekanandhan & KMCH Team in a Liver Camp inaugural function



Dr. Vignesh Kandhakumar's Lecture during a Seminar for corporate clients

Did You Know?



Sir Alexander Fleming FRS FRSE FRCS (6 August 1881 – 11 March 1955) was a Scottish biologist, pharmacologist and botanist. His best-known discoveries are the enzyme lysozyme in 1923 and the world's first antibiotic substance benzylpenicillin (Penicillin G) from the mould *Penicillium notatum* in 1928, for which he shared the Nobel Prize in Physiology or Medicine in 1945 with Howard Florey and Ernst Boris Chain. He wrote many articles on bacteriology, immunology, and chemotherapy. Fleming's accidental discovery and isolation of penicillin in September 1928 marks the start of modern antibiotics.

Organ Donation



A 43 year old male, Mr. N.Selvaraj survived by wife Mrs. Prema living at Popular Mill Colony, Ramnagar, Pongalur Taluk, Tirupur. Mr. N.Selvaraj met with an accident on 12/06/2017, while he was travelling in a two wheeler near palladam, he was suddenly hit by a car and sustained a severe injury. He was then, immediately taken to nearby KMCH Sular hospital for first aid. As they found him critically ill he was shifted him to KMCH, Avanashi road, Coimbatore towards super speciality care. Though he was given an Intensive treatment, the patient was not responding and deteriorated slowly.

Finally on 13/06/2017, Mr. N.Selvaraj was declared “brain dead”. Though the family members were in deep mourning, his brother Mr.Rajendran willingly came forward to donate Mr. N.Selvaraj Organs. In the presence of family members and relatives, team of Doctors from KMCH immediately went into action and completed the statutory requirement in harvesting the organs like Heart, Lung, Liver, Kidneys, Eyes, Skin and Bone.

On 14th June, 2017 morning the doctor’s team harvested Heart, Lung, Liver, Kidneys, Eyes, Skin and Bone from Mr.N.Selvaraj. The harvested organs i.e. Liver & one Kidney were transplanted at KMCH; Heart and Lung were sent to other private hospital at Chennai; One Kidney was sent to SPT Hospital at Coimbatore, Eyes were sent to Aravind Eye hospital at Coimbatore, Skin & Bone were sent to Ganga Hospital at Coimbatore. The family members felt proud that his organs gave new lease of lives to 9 needy people.



KMCH, Coimbatore once again proved its supremacy amongst the Corporate Healthcare players as one of the most successful and efficient “Multi Organ Transplant” Center in Southern India. A 47 year old female, Mrs.Valliyammal from Pollachi met with an accident on 28/05/2017, while she was travelling in a two wheeler. The pavilion rider Mrs.Valliyammal lost her balance and fell on the road sustained a severe head injury. Since she was not wearing helmet during her travel.

She was then, immediately taken to a nearby hospital at Pollachi where the first they found she was critically ill and further referred to KMCH, Avanashi road, Coimbatore. Though she was given an Intensive treatment, the patient was not responding to the treatment and her condition deteriorated slowly. Finally on 29th May, Mrs.Valliyammal was declared “brain dead”. Though the family members were in deep mourning, her husband Mr.Krishnasamy and Son Mr.Manojkumar willingly came forward to donate Mrs.Valliyammal's Organs. The donated heart and kidneys were transplanted to the three needy patients at KMCH Avinashi road. The recipients are doing fine.

The Chairman of KMCH Nalla G Palaniswami thanked Mr. N.Selvaraj & Mrs.Valliyammal's family for this timely gesture and he said that this message has to reach public for better awareness, so that many patients' lives can be saved through this kind of noble gesture.

Welcome to KMCH Family



Dr. Amith Kumar Clinical Geneticist, has completed MBBS at MGR Medical University, Chennai during 1998-2004 and did his M.Sc. Medical Genetics Duncan Guthrie Institute of Medical Genetics at University of Glasgow, UK during 2004-2005 and got MD Credentials ECFMG Certificate from USA during 2007. In 2015 got Family Medicine Specialist from AFPI New Delhi. **Training & Education:** 2006-2007 Clinical Fellowship Pediatrics and Clinical genetics from Royal Hospital of Sick Children Glasgow UK. 2007-2009 Resident Pediatrics and Prenatal Genetics FCRF Chennai. 2010-2012 Resident Neuro rehabilitation SRMC Porur, Chennai. Joined KMCH as Clinical Geneticist.



Dr. Manonmani Ganesan MBBS., MRCPCH., Consultant Pediatrician & Neonatologist MBBS: 20/03/1995 : Tamilnadu Dr. MGR Medical University. MRCPCH - 2004 Royal College of Pediatrics and child health, London, UK. Worked as Senior House officer in Pediatrics at Sunderland Royal Hospital and Bishop Auckland Hospital from 2000 to 2001 & Senior House Officer in Neonatal Intensive care unit at St.Mary's Hospital, Manchester, UK. 2002 Staff Grade Pediatrician at University Hospital of North Tees, UK. Registrar in Pediatrics and Neonatology at University hospital of North Tees , UK. Consultant Pediatrician and Neonatologist at KMCH , City Center, Coimbatore from 2009 - 2017. Joined KMCH Avanashi Road, Coimbatore as a Consultant Pediatrician and Neonatologist.



Dr. Sorabh Kapoor MBBS., MS(AIIMS)., MCh(AIIMS)., Consultant Liver Transplant, Robotic, Hepatobiliary and Pancreatic Surgery. Medical Schooling:1991-96: MBBS Government Medical College, Rani Durgavati University, Jabalpur, India Topped University in all three professional examinations. 1997-00: MS (General Surgery) & 2001-04: MCh (GI Surgery) All India Institute of Medical Sciences, New Delhi. Fellowship in Transplantation Surgery at Hume-Lee Transplant Center, Virginia Commonwealth University, Richmond, VA. Joined KMCH Avinashi Road, Coimbatore as a Consultant Liver Transplant, Robotic, Hepatobiliary and Pancreatic Surgery.



Dr. Varadarajan Kumar completed his undergraduate medical training from Thanjavur Medical College in 1998. General Medical training and completed MRCP (UK) in 2002. First oncology experience was while working as a Junior Oncology Fellow (2003-2004) at Christie Hospital, Manchester and developed a strong interest in this field to pursue this field long term. **Training & Education:** Specialist Registrar training in Clinical Oncology at Weston Park Hospital under the Sheffield Training scheme (2004-2009) and obtained Certificate of completion of specialist training (CCST). Sub-specialty Oncology Fellowship at the prestigious Princess Margaret Hospital, Toronto(2009-2010) Consultant Oncologist in the UK for 7 years (2010-2017). Joined KMCH as Consultant Medical & Radiation Oncologist.

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