



KMCH Touch

Quarterly News Journal of Kovai Medical Center and Hospital



Women's Health... Nation's Wealth...

India has 25% of all
Cervical Cancer Death
in the World.



51% of Indian Women
18 - 52 are Anemic
(as per 2017 - Global Nutrition
Report)



Breast Cancer has
overtaken Cervical
Cancer as leading cancer
in Urban areas



42.5% Postmenopausal
Women >50 have
Osteoporosis in Delhi Study
- IJEM 2018



By 2020, nearly 70% of the
World's Cancer cases will come
from developing countries, with a
5th of those cases coming from
India.

- India's Breast Cancer Epidemic, Lancet 2012



While women tend to have
heart attacks later than men, in
most other situations, they
have worse statistics than
men.

- Indian Heart Association



Message From Executive Director



Women's Health... Nation's Wealth...

Women's Health in India is often ignored & undervalued. While newspaper headlines are on Proton guns, Robotic surgery, Heart Transplants, Stem cells, etc...

All of us in the medical profession know there is more that can be done in universal care. Studies done by KMCH and Mohan Foundation show that we have yet to discover 50 % of our diabetics.

Our research show regardless whether you are rural or urban or semi-urban the amount of diabetics that don't even know they are diabetic is shockingly high.

The plight of Women is worse. Cervical Cancer is under diagnosed at early stages where it can easily be treated. Women often ignore their own health for the benefit of their families and forego their own preventive care. Western world or East, the statistics in heart disease are the same, heart disease are often under diagnosed.

Lifestyle diseases like fatty liver turning into cirrhosis are increasing in number.

We have decided, at KMCH Touch, to do a annual Women's Health supplement to make sure we have a continuous focus on issues which don't grab headlines.

Dr Arun N Palaniswami
Executive Director

Editorial Board

Warm Greetings to all,

It is a great pleasure to get in touch with you all once again through "KMCH Touch". This issue is all about "Women's Health". It is not an exaggeration to say that "Women's Health is Nation's Wealth". We are extremely grateful for all our colleagues who have been enthusiastic in contributing towards this issue.

As always kindly send feed back to Dr. Krishnan Swaminathan. Email Id: drkrishnanswaminathan@kmchhospitals.com

We genuinely hope you enjoy the edition of KMCH Touch.

Dr. Krishnan Swaminathan MD FRCP (Edin)

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K M C H Team KMCH Congratulates...
our doctors

who have been conferred with prestigious awards by the
Indian Medical Association Coimbatore Chapter

LIFETIME ACHIEVEMENT AWARDEES

DISTINGUISHED SERVICE TO COMMUNITY AWARD



Dr. Nalla G Palaniswami MD.,
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KMCH WISHES THEM MANY MORE LAURELS

KMCH Performs India's First Valve-in-valve Replacement on Beating Heart



(Left to Right) Dr. Thomas Alexander - Senior Cardiologist, KMCH. Patient Attender, Dr. Prashant Vaijyanath - Cardiac Surgeon, KMCH. Dr. Nalla G Palaniswami - Chairman, KMCH. Patient Mrs. Lucy Karanja and Dr. Gunaseelan, KMCH.

In what could be termed as a breakthrough in medical procedure, a team of doctors comprising of Dr. Thomas Alexander, Senior Cardiologist,

Dr. Prashant Vaijyanath, Director, Cardiac Surgery and Dr. Gopalumurugan performed India's First Transcatheter tricuspid heart valve replacement via the groin vessel on beating heart, "valve-in- the-valve procedure" for a degenerated tissue valve, at Kovai Medical Center & Hospital, Coimbatore.

65 years old Mrs. Lucy Karanja, a retired staff nurse from Nairobi, Kenya was diagnosed to have tumor in the heart affecting the right sided tricuspid valve. She was operated in Iowa, USA in 2013, an attempt to repair the valve failed and consequently, she underwent a Tricuspid valve replacement with a tissue valve.

She developed complete heart block and a permanent pacemaker was implanted. However, there was accelerated degeneration of this tissue valve owing to which she developed severe narrowing and leakages through the valve.

The only way to treat this is to have a repeat high risk open heart surgery. Dr. Thomas Alexander and Dr. Prashant Vaijyanath however, advised an alternative strategy to replace the diseased valve through a groin puncture by reaching the tricuspid valve through the blood vessel in the groin. Since this procedure is similar to an Angiogram, it is done in cardiac cathlab, thus avoiding a redo cardiac surgery on heart-lung machine.

The procedure was performed on 31st May and was technically successful. Mrs. Lucy has completely recovered and she can expect a normal life. She will be discharged soon. "We are geared for increasingly complex high end cardio vascular intervention, on the strength of our superlative infrastructure and high quality manpower" said Dr. Nalla G Palaniswami, Chairman, KMCH.

There are several patients in our country with tissue valves prone to degeneration as the life of tissue valves is approximately 10-15 years. Such patients traditionally warrant a high risk repeat open heart surgery on heart-lung machine with significant morbidity and mortality, A "Valve-in-Valve" technique may be suitable alternative to them avoiding the redo risky operation.

KMCH Events...



*Liver Transported from
Madurai Private Hospital to KMCH Hospital*



*KMCH's "Fight Women Cancer"
Walkathon*

Heart Failure Clinic - Multidisciplinary Approach In The Management Of Patients With Heart Failure

Dr. R.M. Ranganathan MD.,DM., **Dr. M.L. Awrance Jesuraj** MD.,DM.,CCDS.,CEPS-AC.,PDF (EP).,
Division of Cardiac Pacing and Electrophysiology, KMCH Heart Institute



Heart failure is a chronic, progressive condition in which the heart muscle is unable to pump enough blood through to meet the body's needs for blood and oxygen. Basically, the heart can't keep up with its workload.

Heart failure can involve the heart's left side, right side or both sides. Not all conditions that lead to heart failure can be reversed, but treatments can improve the signs and symptoms of heart failure and help you live longer and reduce your chance of dying suddenly.

Signs and symptoms of Heart Failure :

- Shortness of breath
- Tiredness, fatigue, loss of energy
- Abdominal discomfort
- Loss of appetite
- Abdominal swelling (belly bloat)
- Swollen ankles/legs
- Weight gain

Management of Heart Failure : Heart failure can sometimes be corrected by treating the underlying cause. For example, repairing a heart valve or controlling a fast heart rhythm may reverse heart failure. But for most people, the treatment of heart failure involves a balance of the right medications and, in some cases, use of devices that help the heart beat and contract properly.

Doctors usually treat heart failure with a combination of medications. Depending on your symptoms, you might take one or more medications

Interventions to treat Heart failure Coronary bypass surgery. If severely blocked arteries are contributing to the heart failure and If faulty heart valve causes heart failure, it can be treated by repairing or replacing the valve.

Implantable cardioverter - defibrillators (ICDs). An ICD is a device similar to a pacemaker. It's implanted under the skin in the chest with wires leading through veins and into the heart.

The ICD monitors the heart rhythm. If the heart starts beating at a dangerous rhythm, or if the heart stops, the ICD tries to pace the heart or shock it back into normal rhythm. An ICD can also function as a pacemaker and speed the heart up if it is going too slow.

Cardiac resynchronization therapy (CRT) or biventricular pacing. A biventricular pacemaker sends timed electrical impulses to both of the heart's lower chambers (the left and right ventricles) so that they pump in a more efficient, coordinated manner.

Many people with heart failure have problems with their heart's electrical system that cause their already-weak heart muscle to beat in an uncoordinated fashion. This inefficient muscle contraction may cause heart failure to worsen.

Often a biventricular pacemaker is combined with an ICD for people with heart failure. Ventricular assist devices (VADs) and heart transplants are other options in selected patients.

KMCH Heart Failure Clinic. What is it?

In KMCH heart failure clinic we can help to manage heart failure through a comprehensive approach. Additionally, we are an educational resource to lessen or prevent hospital readmission and increase understanding about heart failure – including the disease process, diet, medications, and symptoms – to improve your quality of life.

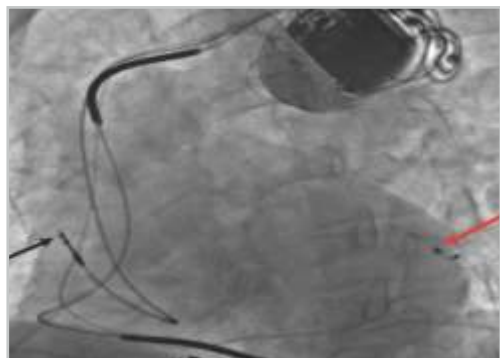
Our Team : In our outpatient clinic, our cardiologists have extensive knowledge and expertise in treating heart failure and work together with a nurse, physician's assistant, all trained in heart failure management and treatment. Our goals are:

- To treat your symptoms actively
- To decrease emergency department visits
- To minimize hospitalizations and readmissions

What to Expect at your Clinic Appointment?

Once you schedule your appointment, we

- Review symptoms and medications
- Provide education so you understand the disease process fully
- Coordinate care with other departments if needed including cardiac rehabilitation, pharmacy, home health and dietary



How can I become a patient at the KMCH Heart Failure Clinic?



A. There are several ways you can be referred to the KMCH Heart Failure Clinic. They include:

- Ask your nurse or physician to refer you to the clinic if you are a hospitalized patient.
- Ask your primary care physician or cardiologist to refer you to the clinic.
- You or a family member can call to request an appointment by contacting over phone

Picture showing Cardiac Resynchronization (CRT-D) device in situ for the management of heart failure and prevention of sudden cardiac death.

KMCH Events...



*World Hand Hygiene Day
Signature Campaign*



*World No Tobacco Day
Signature Campaign*

Multivessel Renal Vascular Anastomosis

Dr. Balasundaram MS., FRCS (EDIN)., Cardio Vascular & Thoracic Surgeon, KMCH



With number of renal transplants increasing at our hospital we are doing more complicated renal vascular anastomosis. At our hospital we had come across single renal artery [73%], double arteries [18%] and triple arteries [9%] and one renal vein [99%] and two veins [1%] of the donor kidney. The renal artery is anastomosed 93% to external iliac artery, 4% to common iliac artery, 2% to internal iliac artery and 1% to aorta and the renal vein 96% to the external iliac vein, 3% to the common iliac vein and 1% to the inferior vena cava of the recipient.

With three arteries, if the lower pole artery is above 2mm in size it is anastomosed to inferior epigastric artery. If the lower pole artery is smaller than 2.0mm size then it is anastomosed to external iliac artery. Recently we come across a donor with three renal arteries and two renal veins on the right side and three renal arteries and one renal vein on the left side based on renal CT angiogram. On laparoscopic exposure, a fourth renal artery of 1.5mm size was present further lower down supplying the lower pole of the left kidney and ureter. The left kidney was harvested and perfusion carried out.

Dr. S. Balasundaram Cardiovascular and Thoracic Surgeon and the team with Dr. R. Vasanthan had done the bench dissection and four renal arteries [with one of the renal artery has early branching] and one renal vein are prepared for anastomosis. [Fig-1].

After exposing adequate segment of the right external iliac artery of the recipient, all the four arteries of the donor kidney were anastomosed in tandem on external iliac artery and the single renal vein to external iliac vein. [Fig-2 & 3]

Routine post operative doppler study recorded uniform arterial perfusion of the transplanted kidney. His post operative period was uneventful and his serum creatinine level had come down to normal.



Four Renal Arteries

[With One Artery Having Early Branching] and One Renal Vein.



Four Renal Arteries Anastomosed to

External Iliac Artery and Single Renal Vein to External Iliac Vein.



KMCH Events...



*KMCH Doctor wins Vocational Excellence Award
From Coimbatore Texcity Rotary Club*



Women's Imaging and Intervention

Pediatric Intensive Care - Where Time Is Life....

Dr. A.R. Mullai Baalaji, Dr. S. Ashok Kumar, Dr. T.P. Vigneshwaran, Consultant Pediatric Intensivist



The speciality of Pediatric Intensive Care has seen tremendous growth in the past decade, however, it is still a developing specialty in the Indian subcontinent. There are few accredited centres in the country, still only a handful in the state of Tamil Nadu, barring the state capital Chennai. The Pediatric Intensive Care Unit at KMCH, Coimbatore has the distinction of being the first in the region of Western Tamil Nadu to be formally accredited by the Indian Academy of Pediatrics, for which the generous support by the Management team needs special mention.

Is Intensive Care necessary for children?

The big debate in the Indian context had been the necessity of Intensive care, however, with the improvement in primary care and preventive maternal and child health services, the provision of intensive care services to the needy at the right time would go a long way in achieving our 'Millennium Development Goals'. Also, the acute and reversible nature of most childhood illnesses make, provision of intensive care, a rewarding exercise.

Who require Intensive Care?

Considering the diminished physiological reserve of children, it becomes imperative that the approach to Intensive Care in children has seen a shift from the 'Last ditch effort' to one of 'Anticipated monitoring and Targeted Interventions'. Also, the unique susceptibility of children make them specially vulnerable to untoward complications, when the necessary care is not provided on-time.

The common conditions that need intensive care include Tropical infections such as Dengue, Scrub typhus, Septic shock, Pneumonia, Bronchiolitis, Meningitis, Encephalitis, Trauma, Poisonings, Acute Kidney Injury, Acute Liver Failure, Metabolic crisis such as IEM, DKA to name a few. The key to successful outcomes in such children are early identification of the critical nature of the illness and prompt referral to a centre equipped with Pediatric Intensive Care Services. The adage "Time Is Life" aptly suits the Pediatric Emergency and Critical Care services, as any delay in appropriate care diminishes proportionately the chances of successful results. The PICU at KMCH has the facilities for non-invasive and invasive ventilation, advanced hemodynamic and neuro critical monitoring, Renal replacement, bedside Echocardiogram, Bronchoscopy and Extra corporeal Membrane Oxygenation (ECMO). A young and dynamic team comprising of Pediatric Intensivists, Critical Care trained nurses, respiratory therapists, clinical pharmacists and other supportive staff strive to bring back smiles in the family of the critically ill. The modern facilities and availability of Pediatric Intensivists on a 24*7 basis makes the unit a trusted referral centre in this region. The year 2017 had been a fruitful year, with a total of 420 PICU admissions, and successful outcome obtained in 85% of critically ill children. Considering the criticality of the presentation, the outcomes have been satisfactory. However, the stress needs to be focussed into pre-hospital stabilisation and transportation at the right time, which would go a long way in improving the overall outcomes.

Team Effort That Brought Back Life

Master D, 1 year old boy, who was playing at home was found immersed in a bucket of potable water. He was last well seen about 10 minutes prior to the event, and when they witnessed him being immersed, was unconscious, limp and cyanosed. Rushed to nearby KMCH, Sulur, he was received in a state of cardiorespiratory arrest in the Emergency. High-quality Cardiopulmonary Resuscitation was initiated, and he needed a total of around 10 cycles of CPR before he could be revived. He was then rushed to KMCH Main Center for Post-resuscitation care. The initial blood gas revealed severe metabolic acidosis indicative of tissue hypoxia and ischemia. He was unconscious and had severe ARDS at the time of PICU admission secondary to aspiration and lung injury. The prognosis after 'Out-Of-Hospital Cardiac arrest' in children has not been great, with intact survival documented in only 10% of such victims. With these realities in mind, the child was managed with neuroprotective measures and subjected to Therapeutic Hypothermia as per PALS recommendations.

After 3 days of mechanical ventilation and neuroprotective measures, he was stabilised and ready to be assessed for neurological function. It was gratifying to see the child conscious and awake after days of hard work and uncertainty. Also, the Neuroimaging - MRI Brain with diffusion weighted images which showed a normal brain parenchyma was a pleasant surprise to the entire team. This was one of the hundreds of success stories that brought back smiles to anxious families, but for the timely team effort and resuscitative measures.

Psychogenic Non Epileptic Seizures in a Child with Epilepsy - Case Report

Dr. Sujatha Chinnappan, Consultant Paediatrician with Epilepsy Interest, **Dr. Chitra Jayakumar**, Consultant Psychiatrist, **Mrs. Sujata Missal**, Head of Occupational Therapy Department



Introduction: 1 in 5 people diagnosed with epilepsy, when assessed in Specialist epilepsy Center are found to have non-epileptic seizures. Psychogenic non-epileptic seizures (PNES) are also diagnosed in 1 in 6 of those who have epileptic seizures or had it in the past¹. It is important to differentiate PNES from epileptic seizure as misdiagnosis can lead to unnecessary medications, investigations and hospitalization. In most instances it is important to do video EEG to confirm NEAD.

Case report: We present a case of PNES in a 10 year old boy with focal epilepsy diagnosed in Nov 2017 (normal MRI brain). No breakthrough seizures on single antiepileptic. He presented to us after few months (March 2018) of diagnosis with episodes of unresponsiveness associated with falls to the floor with no abnormal movements of the body or limbs. He complained of headache before and after the episodes. Duration varied from few minutes to 4 hours. During the prolonged episodes, he cried for few minutes saying that he has severe headache then became unresponsive for few minutes and again cried due to headache. Another prolonged episode was characterized by fainting, followed by drooling of saliva, eyes closed, but responding to commands by nodding his head which lasted for nearly 4 hrs. Seen him in the clinic and since ECG was normal I reassured the child and parents and sent them without changing the dose of anti-epileptic with a plan to review in few weeks.

Few weeks later he presented with h/o aggressive behavior, claiming to be possessed by God, asking his mother to do pooja for him. He also said that he was missing someone and doesn't feel worth living in this world. He was also hearing voices which were asking him to kill himself. He said he was also speaking to an imaginary person. He was reviewed by the Psychiatrist and occupational therapist (OT). And it came to light that he was stressed about overload of school work, wanted to go on a holiday with family but was not happening and got fits when stressed. He was counselled by Psychiatrist and OT and was given clonazepam 0.25 mg at night for 1 week only. Since then he has been doing well with no further episodes and breakthrough seizures till date.

Discussion: Psychogenic non epileptic seizures previously known as pseudoseizure or Non epileptic attack disorder (NEAD) is a conversion disorder characterized by sudden and time-limited disturbances of motor, sensory, autonomic, cognitive and/or emotional functions that can mimic epileptic seizures in the absence of electrophysiological changes¹. There are two types of non-epileptic seizures. They are organic (syncope, hypoglycemia, hypocalcaemia) and non-organic non epileptic events which includes dissociative seizures, Panic attacks and factitious seizures².

PNES is seen in younger children as low as 5 yr. old and female preponderance is seen in older children and adults. The semiology of PNES in younger children is more of unresponsive episodes with subtle motor components whereas in older children it is mainly motor movements comprising bizarre, irregular, jerking, or thrashing movements of the extremities, pelvis not typical of any of the known types of epileptic seizures.

The main precipitating factors for PNES in children are school difficulties, family discord, interpersonal conflict, exam fear, and need of attention, physical and sexual abuse. In PNES, psychosocial conflicts are "converted" to physical symptoms rather than expressed through a healthy verbal channel. Most of the children have associated psychopathology like depression, anxiety, social phobia, panic and post-traumatic stress disorder.

PNES can be diagnosed with comprehensive history taking by interviewing the child and parents separately, viewing the video of the episode as video recording is possible nowadays due to the increased availability of smart phones and it may alleviate the need for video EEG which is the gold standard investigation in the diagnosis of PNES. Multidisciplinary approach involving Paediatrician, child Psychiatrist, Psychologist

and Occupational therapist to address precipitating factors (depending on whether they are ongoing or historical) and providing psychotherapy and/or pharmacotherapy to treat co-morbid mental health and behavioral difficulties is essential. Explaining the diagnosis to the child and the parents emphasizing that the attacks are real and that there is psychogenic basis for the events will suffice in most of the cases for good outcome. Most of the children with PNES have good outcome compared to adult patients with PNES.

Conclusion: Psychogenic non epileptic seizures are common in children with epilepsy and also without epilepsy. Recognition of PNES from epileptic seizure is very important to prevent unnecessary medications, investigations and hospitalization. Comprehensive history taking alone and some instances video EEG is needed to confirm the diagnosis of psychogenic non-epileptic seizures. Multidisciplinary team approach will improve the outcome of the patient.

Uninvited Guests of the Chest!!

Dr. S. Santhakumar, Dr. J. Venugopal, Dr. C. Santhosh, Dr. Deepak, Dr. S. Manjula

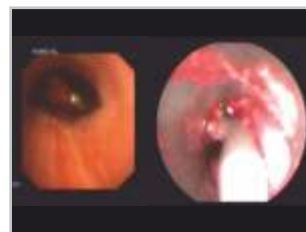
Department of Interventional Pulmonology, KMCH, Coimbatore



In extremes of age one of the common reasons for respiratory distress is foreign body inhalation. Even though it is more common in toddlers, elderly people also cannot escape especially those who have neurological issues. High index of early suspicion and intervening at right time is extremely important in these patients otherwise it can be fatal. We share our experience in some of the difficult foreign body retrievals in Department of pulmonology at KMCH recently.

Case 1 - Story Of A Costly Sapota Seed : A 50 year old female presented with alleged history of doubtful inhalation of a sapotta seed few weeks back. She had breathing

difficulty and a whistling sound during breathing since then. For obvious reasons being a non radio- opaque material Chest x Ray was normal and she was symptomatically treated as bronchitis and wheezing at local level. When she came to our ENT department, Dr.Ramanikant, ordered HRCT lungs and the foreign body was located in left main bronchus. O/E she had an spo2 of 98% with B/L wheeze and left sided predominant stridor. She was planned for removal of foreign body retrieval by bronchoscopy dept of pulmonology. On bronchoscopy the foreign body was visualised in the left main bronchus . Hence attempts to remove the foreign body with flexible bronchoacopy using cryo probe and the basket, retrieval done through rigid bronchoscopy and forceps.The foreign body was mobilised into the right main bronchus initially for a better visualization and control. Finally eventhough she was very happy about her life is saved, she was little worried about few thousand rupees of cost of the suppotta seed she inhaled.



Case 2 - A Stuck Led Bulb : A five years old boy was referred for right lower lobectomy to our centre because of two failed attempts with rigid and flexible bronchoscopy elsewhere. It was a LED bulb of an electronic toy aspirated 3 days back. Child had cough, and chest pain with breathing difficulty. It was reported that the bulb is stuck in to right lower lobe bronchus and attempted pulling could result in bronchial tear and hence he was referred for lower lobectomy. In our place we located the foreign body in the medial basal segment of right lower lobe and it was stuck due to its reverse position and any proximal pull was not possible due to its pin impinged to bronchial wall. We tried to dilate the bronchus by vascular balloon through ultrathin flexible bronchoscope which was introduced

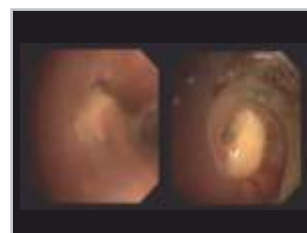
through a 4.5 sized rigid barrel which was held at right lower lobe bronchus and rotated the foreign body. As further attempts failed to mobilize it proximally, both the pins were broken down and removed separately. The bulb on was mobilized proximally by vascular balloon placed distal to the foreign body and inflated. While the foreign body was withdrawn in to the lobar bronchus, it was grabbed by rigid forceps and brought in to the rigid barrel and removed along with it. Child was saved from thoracotomy.



Case 3 - Foreign Body As Pneumothorax : A 70 years old gentleman was hospitalised with sudden onset breathing difficulty ,right sided chest pain and cough for 2 days. At the time of admission he was in respiratory distress, hypoxic, tachypnoeic, tachycardic and normotensive. clinical examination revealed right sided pneumothorax and chest X ray confirmed that. He was managed with Inter costal drainage. Even though his symptoms improved partially, the lung has not fully expanded on X- ray and it showed right lower lobe collapse. HRCT lungs showed complete occlusion of right bronchus intermedius by a soft tissue lesion.

Flexible bronchoscopy confirmed the same and it was a brownish lesion with granulation around it with minimal bleed on biopsy. Histopathology showed granulation tissue. While retrospectively asked, patient gave a history of aspiration of a betel nut recently. Foreign body was recovered totally in small pieces using Cryo probe through flexible bronchoscope. Immediately the right lower lobe expanded well as the patient also improved symptomatically.

Case 4 - Toddler With A Ground Nut : A 14 months old boy was brought with alleged H/O accidental aspiration of groundnut 2 days back following which he had developed shortness of breath. O/E B/L wheeze was present with decreased air entry on right side.CXR showed Right sided hyperinflatedlung. Under rigid bronchoscopy the foreign body was localised to the right bronchus intermedius.Theforeign body was retrieved by using basket, rigid forceps and biopsy forceps in multiple pieces. A check brochoscopy was done and it was ensured that no residual remenants of the foreign body was left behind.



Case 5 - A Battle With A Needle : An 9 months old male child was brought in respiratory distress after accidental inhalation of a stich needle. He had cough and mild stridor and blood tinged oral secretions. Foreign body was located in left main bronchus on chest x ray. On bronchoscopy the needle was located in to left main bronchus in oblique position with the tip facing medially hitting the medial wall. It was carefully dislodged in to vertical position with rigid bronchoscopic forceps and retrieved by same. Child was saved in time. Any vigorous cough could have induced serious airway and mediastinal injury by the needle in this child fortunately which had not happened.

KMCH Events...



Cardiac Imaging Course - 2018

Sarcoma Brachytherapy - Stretching the limits

Dr. Firoz Rajan , Dr. R. Subramaniam & Dr. Bharath Rangarajan



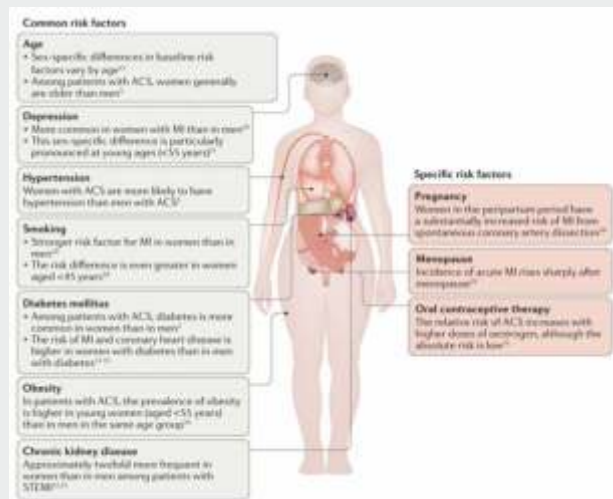
Introduction : Sarcomas are rare mesenchymal cancers which usually occur in the young individuals and include a plethora of histologies . The Grade of the tumour is one of the most important prognostic factors which determine the survival. Treatment is by multimodal approach with surgery as the mainstay followed by adjuvant radiation to the tumour area and chemotherapy in case of high grade cancers. Brachytherapy is a form of radiation where the radiation source passes through tubes placed at time of surgery so that the radiation is delivered to the tumour bed area with minimal damage to normal deeper tissues .Combining this form of radiation with conventional external beam radiation help us to deliver a high dose of radiation to the area at maximum risk for recurrence with improved local control and lesser toxicity. We present a rare case of a high grade synovial sarcoma in a 31 year old male. We consider this as a rare case because of the site of occurrence and the challenges it gave to the treatment team when it came to treatment delivery.



Case Summary : After a Trucut biopsy and confirmation of the disease, this patient was adequately staged and planned for a wide excision of the 15 x 18 cm lesion in the midline of back on 11.07 2016 . The post surgical defect was huge would have been skin grafted immediately for cover. But Brachytherapy with a skin graft over it would have affected the graft take up and left a chronic post radiation wound . Hence we decided to deliver brachytherapy in an open wound with 18 Gy delivered over 3 days and the skin grafting was done after completion of brachytherapy . He subsequently went on to receive chemotherapy and external beam radiation and is presently alive and disease free for the last two years.

Discussion : Staged reconstruction after brachytherapy is known to reduce the wound complications which are known to occur after radiation in sarcomas. This case shows that disease control was possible in a case with high probability of treatment failure by a very rare approach taken by the treatment team.

Cardio Vascular's Risk Factors in Women



Cardiovascular Disease Burden In Women

Dr. R. Sureshkumar MD., DM., Consultant Interventional Cardiologist



Case Scenerio : 24 year old young lady Mrs. K, mother of one child, presented to KMCH ER with vague chest pain of 2 hour duration. She had no co-morbidities and was not on oral contraceptives. Clinical examination was unremarkable. But her ECG showed ST segment elevation in Lead – II, III, aVF. Her echo showed inferior and posterior wall hypokinesia. She was loaded with dual anti platelets and statins. She underwent coronary angiogram which showed distal circumflex occlusion, for which thrombosuction alone resulted in normal looking artery with no residual stenosis.

Tip of Iceberg : In India, cardiovascular disease(CVD) remains the leading cause of death, approximately 20% of the total death in men and 16.4% in women. In India age adjusted CVD mortality rates are 265/1 lakh in women which is >2-3 times greater than the united states of America, according to WHO reports in 2010.

Importance and severity of CVD burden is underestimated in women. The pathophysiology of atherosclerosis is different in women. They have higher risk of blood coagulability, endothelial dysfunction, smaller coronary artery size and diffuse atherosclerosis. Atherosclerotic plaque in women is less fibrotic and contains more lipid filled foam cells, implying greater potential for vulnerability of plaque rupture, plaque erosion and thrombosis. Myocardial infarction with coronary artery spasm, spontaneous coronary artery dissection, stress induced cardiomyopathy, also seen in women.

Low HDL and high triglyceride are better cause of coronary artery disease risk in women than high concentration of LDL. Smoking and Oral contraceptive pills increase the risk of CAD & DVT, apart from other traditional risk factors like systemic hypertension, diabetes mellitus, obesity. Obesity prevalence is higher among women and obesity increased relative risk of CAD by 64% in women according to FRAMINGHAM HEART STUDY.

Women usually present more with Unstable Angina than NSTEMI/STEMI. Silent MI is common (35%) in women. ECG changes are minimal among female patients. BNP and CRP are better predictors of ischemic events in women. Although women develop heart disease about 10 years later men, they tend to have worse outcome as compared to men. Regarding the symptoms of IHD, apart from chest pain, nausea, dizziness, atypical chest pain, back pain, breathlessness, perspiration, abdominal fullness occurs more commonly in females. The poorer outcome are partly related with lack of recognising the heart attack symptoms.

Women are less likely to receive the appropriate preventive therapy or guidance such as lipid lowering therapy, antiplatelets like aspirin and therapeutic life style changes than men. Cardiac rehabilitation therapy also underused in women. The reason may be multifactorial but partly due to lack of referral by the family as well as by the physicians. Appropriate recognition of the symptoms of CVD and early referral of women patients to tertiary care centre will lead to better clinical outcomes which is essential for the society.

Conclusion:

- Women and men with acute coronary syndrome (ACS) tend to present with a different constellation of symptoms, although at different rates.
- Women often have alternative mechanisms of ACS, such as spontaneous coronary artery dissection and vasospasm, beyond the plaque rupture most typically seen in men.
- Across the range of ACS, women generally receive less aggressive invasive and pharmacological care than men
- Sex-related outcomes after ACS vary by age; young women have worse short-term and long-term outcomes than men, but old women have similar outcomes to those of old men.
- Representation of women in clinical cardiovascular trials needs to increase in the plethora of unknowns that remain about sex-related differences in ACS.

Insulin Pumps In Pregnancy Complicated By Type 1 Diabetes : A Game Changer

Dr. Krishnan Swaminathan MD (UK), FRCP (UK), Consultant Diabetologist & Endocrinologist



Mrs. Shenba, a 23 year old lady with pre-existing Type 1 diabetes since 10 years of age presented to us with a bad obstetric history. She had been married for 3 years with a history of two spontaneous miscarriages in the first trimester and one medical termination of pregnancy due to a cardiac anomaly in the fetus. She had been treated elsewhere for her Type 1 diabetes with actrapid and insulatard using syringes and vials with extremely poor glycemic control. Her Glycosylated haemoglobin during each pregnancies were $> 9\%$ with brittle diabetes complicated by unexpected severe hypoglycemias. The couple were thoroughly depressed with no hope for a successful pregnancies. Detailed pre-pregnancy counselling was given and insulin pump as a therapeutic option was suggested. After insulin pump

training, Mrs. Shenba had the pump deployed along with dietetic advice, carbohydrate counting and dose adjustments training. The Glycosylated haemoglobin reduced significantly to $< 7\%$ within 3 months and was maintained at $< 6\%$ during the course of pregnancy with no significant hypoglycaemia. Anomaly scan was normal at 21 weeks and she went on to have a successful outcome with the birth of a male baby weighing 3.1 kgs. The baby had a very brief NICU stay with no evidence for neonatal hypoglycaemia. It was one happy couple at the time of discharge, extremely grateful to the team and the insulin pump for achieving such a successful outcome.

Insulin pumps are smart phone like devices that give a continuous delivery of insulin similar to pancreas. Currently, Insulin pumps are standard of care in Western countries for patients with Type 1 diabetes, especially to those who are pregnant. Unfortunately, economic circumstances make insulin pumps out of reach for many common families in India. These pumps are operated by a simple AAA battery and have an insulin reservoir that holds up to 300 units of insulin. There is a small tubing that connects the pump to the subcutaneous tissue. There are two important components on the insulin pump, the bolus and the basal insulins. The basal insulin makes all the difference in terms of adjusting basal doses every 30 minutes. This gives great flexibility for patients on insulin pumps as the insulin doses can be adjusted easily for exercises and food. There is compelling evidence for insulin pumps in terms of improving quality of life, reduction in episodes of severe hypoglycaemia, improving hypoglycemic awareness, improvement of glycemic control and reduction in complications.



KMCH Diabetes & Endocrine Department has the maximum number of children and adults on insulin pumps in Coimbatore district. Currently 33 children are on insulin pumps with excellent improvement in glycemic control and quality of life. KMCH Diabetes & Endocrine Department has partnered with Medtronic India to supply insulin pumps, through a special programme, to poor children with type 1 diabetes. If you have any patients either with Type 1 diabetes, insulin requiring Type 2 diabetes or pregnant women who may benefit from an insulin pump, kindly mail us on drkrishnanswaminathan@kmchhospitals.com or call us on 0422 4324651.

Congratulations

Successfully Completed FRC Path (Histopathology) (UK)



Dr. Preithy Uthamalingam

Q&A with Dr. Rupa Renganathan, Head of KMCH Breast Center



Dr. Rupa Renganathan, M.B.B.S., DMRD, DNB. Radiology is passionate about the prevention of Breast Cancer. She has been heading the KMCH Breast Center for the last 5 years and is active in conducting Breast cancer awareness programs in the community. She has specialized her focus into Mammogram, soft tissue USG and MRI Mammogram and all breast interventions.



1. What is the current status of breast cancer with modern advances in India? What are the current survival rates?

NICPR - The National Institute of Cancer Prevention and Research reports that Breast cancer is the most common cancer in women in India and accounts for 27% of all cancers in women. The incidence rates in India begin to rise in the early thirties and peak at ages 50-64 years. In urban areas, 1 in 22 women develops breast cancer during her lifetime as compared to rural areas where 1 in 60 women develops breast cancer in her lifetime. One in two women diagnosed with breast cancer dies of it. The main reason being lack of awareness about breast cancer, the importance of regular screening and hence they present in late stages.

60% Survival at 5 Year Survival in
Stage 1&2

Vs

10 % Survival at 5 Years in
Stage 3&4

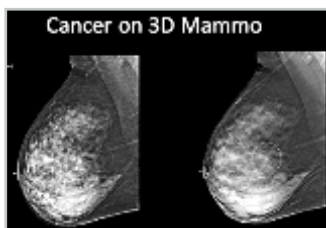
2. What is a Breast Center? How does it differ from just going to see a regular doctor Or having a mammogram at an imaging center?

The Breast center is a one stop center for all patients who come with any breast related problem. "We screen, we diagnose and we manage" has been the motto of KMCH Breast Center. The patient need not go to different places for consultation, imaging and biopsy. The triple assessment for any breast problem is all done at one place which includes clinical breast examination, imaging and biopsy. If the diagnosis is normal or benign / non-cancerous, she is also counselled at the same place. She is also taught to examine her breast herself regularly and is also advised to come for follow up if necessary.

If the findings are suspicious of cancer, the need for a biopsy is explained in detail to the patient and the family. The tissue sampling (biopsy) is done on the same day in the Breast Center itself as this avoids the hassle of the patient wandering to various places across the hospital. We feel that this comfort is very important especially for a patient who is anxious with the news of a suspicious lesion in the breast.

3. Do you only work within the KMCH system? What would happen if an outpatient doctor refers to you?

Yes, I am attached only to KMCH. But, that doesn't mean that I don't cater to patients outside Coimbatore or patients referred from other hospitals or clinics. I would say that a handful of patients come to the KMCH Breast Center just by the word of mouth and another good number are referrals from the GPs and our Master help Check up programmes.



4. Is there anything special about the equipment you use?

The state-of-the-art digital mammogram with tomosynthesis at KMCH is fully automated equipment. This machine calculates the thickness of the breast and delivers the right compression and dose for optimal images. The machine also rotates and acquires multiple images and the entire breast is imaged with multiple thin slices with a thickness of 1 mm. This helps the radiologist to identify lesions as small as 3 mm. KMCH is also first in the country to have synthesised mammogram where the 2D images are reconstructed from the 3D slices and this decreases the radiation exposure significantly without compromise on image quality.

5. Do you do anything to track patients who are scared to come for follow up ?

We have a database to track the patients who do not come for follow-up as advised. SMS intimation is provided to all patients who require

follow-up. A reminder for annual screening is also sent to patients who are on regular screening program.

6. What other services do you provide?

In addition to imaging and diagnostic facilities, the breast center is also has a team of experts in various fields of cancer diagnosis and treatment which includes imaging, pathology, PET CT for staging, medical and surgical oncology and radiation oncology. We also have counsellors and trained nurses to provide good post-operative care and rehabilitation. The center also provides genetic counselling and study to identify genetic mutations as a cause of breast cancer. The center offers percutaneous excision of benign/ non-cancerous breast lumps with no scar.

7. Why have you chosen Breast Cancer imaging as your focus?

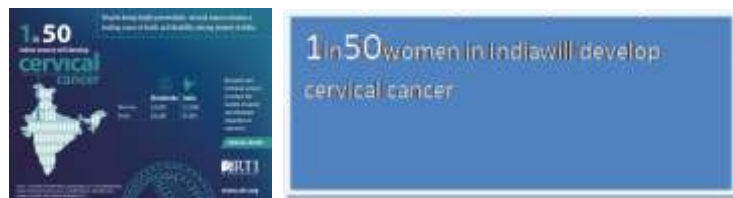
Our society is bound by certain cultural and religious beliefs and breast problems are still a very sensitive issue to most of the women in our country. Many women are reluctant to consult male doctors with a breast problem, they neglect their own health due to family obligations and are over-dependent on other family members to seek medical help and all of these causes delay in diagnosis. Breast cancer can be easily diagnosed even in asymptomatic stages through screening test - a mammogram. I am passionate about breast imaging not only because I sympathize with each of the problems women in India face but also being a woman I am keen to help the society by creating awareness, identify early cancers and also to be a first point of contact when a lady comes to hospital for seeking solution for her breast problem. Being a woman, it is easy to interact with me without any hesitation and inhibition.

8. What do you see as the future of breast cancer treatment?

There is lot of advancements in the surgical management of breast cancer which are already in clinical practice. The aim is to be less and less invasive with preservation of cosmesis. Most of the early breast cancers are now treated with lumpectomy without the need for removal of entire breast. Oncoplastic breast surgeries are being combined with more extensive surgeries. The medical management of the breast cancer is also focused on targeted therapies which has maximum effect on treatment. Breast cancer is a group of heterogeneous diseases and is associated with different clinical outcomes and therapeutic opportunities. Multiple molecular tools are now available to interrogate the biology of breast cancer which will help to personalise the treatment to every patient so that the maximum effect of the treatment is achieved with less side effects.

Cervical Cancer Screening - Time To Act

Dr. Anbu Subbian DGO., DNB., MRCOG (UK)., Fellow in Gyn. Oncology., Consultant Gyn. Oncologist



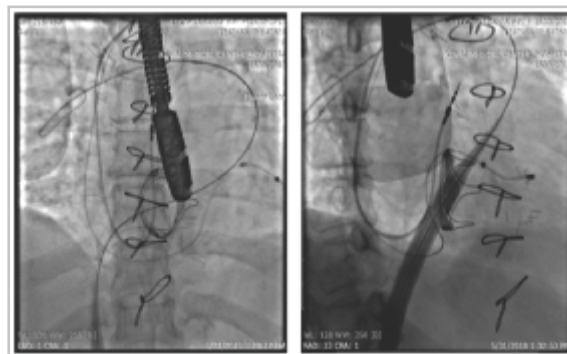
World over, cervical cancer is the fourth most common cancer and the overall incidence has dropped because of organised screening programmes, early detection of cancers and appropriate treatment in the form of surgery or chemoradiation. Recently, HPV vaccination has been added to the armamentarium in the fight eliminating cervical cancer.

In contrast, India still remains a main contributor to the world's cervical cancer cases. One in four women who is diagnosed with cervical cancer in the world, is an Indian woman. According to the Indian Council of Medical Research's consensus report on Cervical cancer (2016), the number of cases has increased from 0.11 million in 2000 to 0.16 million in 2014

The proportion ranges from 15% to 55% of female cancers in different parts of the country. Over 80% of the cervical cancer present at a fairly advanced stage and annually around 80,000 deaths are reported in India. Contributing to this, is the state of screening in India, which has a dismal and varied uptake in different parts of the country. Another factor is the lack of availability of specialists and facilities, which means that even after diagnosis, many patients do not get the standard of care treatment.

New recommendations on cervical cancer screening:

Till now we have been following guidelines established by WHO. FOGSI (Federation of Obstetric and Gynaecological Societies of India) Gynecologic Oncology Committee has issued recommendations for cervical screening for the first time in January 2018. The unique feature of this guideline is it takes into consideration the available resources, clinical conditions, population preferences and research evidence in the Indian context while formulating the management algorithms. The first step is identifying the setup in which one practises - low resource or good resource and then apply a suitable screening test.



Guidewire is passed through the Degenerated Bioprosthesis & over that a large delivery sheath is inserted through the diseased valve into the right heart.

The valid options available for screening are:-

- HPV test (testing for the Human Papilloma virus itself from a sample obtained from the uterine cervix akin to a PAP smear)
- PAP smear (can be conventional testing or Liquid based cytology)
- Co-testing (both PAP smear and HPV testing)

Table 1 : Resource stratification and suggested modalities for screening and management of precancerous lesions of cervix.

Setting	Screening Tools	Triage	Management Options	Single Visit Approach Strategy
Good Resource Settings	Primary HPV DNA test or Co-testing (HPV test + Cytology) or Cytology or VIA	Cytology \pm Newer modalities,* HPV test, HPV Genotyping for 16/18, Colposcopy VIA	LEEP, Conization, Cryotherapy, Thermocoagulation	See and Treat Approach
Limited resource Settings**	VIA	Colposcopy if available	Cryotherapy, LEEP \pm Conization Thermocoagulation	Screen and Treat or Screen, See and Treat Approach

- VIA - Visual Inspection with Acetic acid (Simple bed side test using 3-5% acetic acid dabbed on the cervix and looking for white changes on the cervical epithelium)

The Recommendations for Screening

	Good Resource Settings	Limited Resource Settings
Target age group (years)	25-65	30-65 (N.B.: in post-menopausal women, Screening with VIA may not be as effective)

Age to start (years)	Cytology / Primary HPV testing at 25 Co - testing at 30	30
Frequency	Primary HPV testing or Co - testing - every five years Cytology - every three years	Every 5 years (at least 1-3 times in a lifetime)
Age to stop (years)	65 with consistent negative results in last 15 years. Women with no prior screening should undergo tests once at 65 years and, if negative, they should exit screening.	

With guidelines available for the Indian scenario, the onus is on every gynecologist, to encourage women to undergo screening and institute the appropriate treatment.

Management of Abnormal Pap Smears

The general rule of thumb is to do a colposcopic assessment of the cervix and directed biopsies from abnormal areas. Colposcopy is a simple, out patient procedure that involves examination of the vagina and cervix under magnification. Vascular patterns that signify preinvasive or invasive disease are identified.

Dilute Acetic acid and Lugol's Iodine are applied on the cervix to look for colour changes in the epithelium and quantified based on the severity. Appropriate biopsies are taken and subjected to histopathological examination.

Indications for Colposcopy Referral

- Suspicious - looking cervix
- invasive carcinoma on cytology
- CIN 2 or CIN 3 on cytology
- Persisting (for more than 12 - 18 months) low - grade (CIN 1) abnormalities on cytology
- CIN 1 on cytology
- Persistently unsatisfactory quality on cytology
- Infection with oncogenic human papillomaviruses (HPV)
- Acetopositivity on visual inspection with acetic acid (VIA)
- Acetopositivity on visual inspection with acetic acid using magnification (VIAM)
- Positive on visual inspection with Lugol's iodine (VILI)

Management of Preinvasive Lesions

The basis of cervical screening is that Invasive cervical cancers are usually preceded by a long phase of preinvasive disease. This is characterized microscopically as a spectrum of events progressing from cellular atypia to various grades of dysplasia or cervical intraepithelial neoplasia (CIN) before progression to invasive carcinoma.

Cervical intraepithelial neoplasia is graded into low and high grade. Low grade lesions can be followed up or treated by cryotherapy. Cryotherapy involves the application of refrigerant gas on the cervical lesion through a probe resulting in ablation of the lesion.

High grade lesions are usually treated by excision of the transformation zone inclusive of the lesion (LOOP EXCISION OF CERVIX by electrocautery). Some patients with coexistent gynecological problems like fibroids or Abnormal uterine bleeding may opt for a hysterectomy. Follow up after treatment of CIN is important and is done as follows.

Follow Up After Treatment of CIN

Follow up after treatment (Method and Interval)	HPV testing (preferred) or Cytology 12 months	VIA 12 months
Screening following abnormal reports > CIN 2 + irrespective of method of treatment	20 years	
Screening in Hysterectomized women	<ul style="list-style-type: none"> - Following hysterectomy in which cervix was removed for benign causes : no need for screening, unless there is history of previous cervical intraepithelial neoplasia - Absence of cervix must be confirmed by clinical records or examination - If indications for hysterectomy unclear screening may be performed at clinician's discretion 	
Follow up in women with CIN in hysterectomy HPE report	Need to be screened with VPN at 6 months and 18 months	

Management of Invasive Cancers

All invasive cancers should be referred to a multidisciplinary team in a comprehensive cancer center. It is recommended that these cases be discussed in a tumour board setting to optimise treatment options and outcome. The options available are surgical (Wertheims or Radical hysterectomy) for early stages and chemoradiation for both early and advanced stages depending upon the patient and tumour characteristics.

Facilities available at KMCH encompasses the entire spectrum from screening, evaluation and management of preinvasive and invasive cervical disease.

These include:

Pap smear – Conventional and liquid based, HPV testing, Colposcopy, Cryotherapy and Loop excision, Hysterectomy (Both open and minimal access including robotic hysterectomy), State of the art radiation facilities to treat advanced stage cervical cancers, Pain and Palliation Clinics

Approach To HPV Vaccine

Dr. Atima Pathak MS (OBS & Gyn), Consultant Obstetrician & Gynecologist



Cervical cancer in India ranks as the second most frequent cancer among women next to breast cancer.

Incidence

India -1,22,844
Total world -5,27,624
India -23% of new cervical cancer cases in world.

Mortality

India – 67,477
Total world – 2,65,653
India – 25% of deaths due to cervical cancer in world.

India accounts for 1/4 th of cervical cancer cases and deaths worldwide. Current estimates indicate that every year, in India, more than 100,000 women are diagnosed with cervical cancer with a crude incidence rate of 20.2 .

HPV (Human Papilloma Virus) is a necessary cause of cervical cancer. The HPVs are a family of nonenveloped viruses that belong to the family Papillomaviridae.

Oncogenic Types

High risk group

HPV- 16,18,31,33,45,52,58

> 75% of cervical cancer

> 50% of vaginal & vulvar cancer.

Non Oncogenic Types

Low risk group

HPV- 6,11

90% of anogenital warts

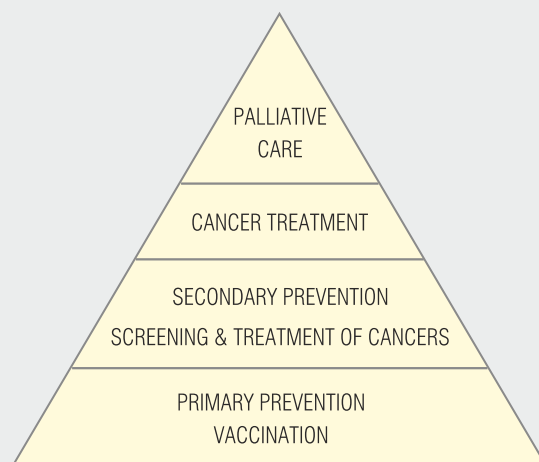
Gender :

- 90% of cancers caused by oncogenic HPV occur in women only .
- 2% of cancers caused by oncogenic HPV occur in men only.
- 7% of anal & oropharyngeal cancers in both men & women.

Age :

- There is no age at which all boys & girls are uninfected with oncogenic HPV types.
- Half of new cases annually are coming from adolescents.
- In adolescents, prevalence peaks at 60-80% in young women between second & third decade due to onset of sexual exploration .

HPV Vaccination : The Basis of Cancer Control



PREVENTION STRATEGIES :

Screening : Well organised cervical screening programmes and wide spread quality cytology can reduce cervical cancer incidence and mortality. However, competing health care priorities, insufficient financial resources, weak health systems and limited numbers of trained health care providers have made high coverage for cervical cancer screening in most low and middle income countries difficult to achieve.

Vaccination : The introduction of HPV vaccination has considerably reduced the burden of cervical cancer.

HPV VACCINE

Characteristics :

Types Of Vaccine	BIVALENT CERVARIX	QUADRIVALENT GARDASIL	NONVALENT GARDASIL 9
HPV Types In Vaccine	16,18	6,11,16,18	6,11,16,18,31,33,45,52,58.

Contraindications :

- 1.Allergy to yeast & yeast products.
- 2.Allergy to previous dose of HPV vaccine irrespective of brand.
- 3.Pregnancy & lactation.
- 4.Patients with moderate / severe acute illness.

Recommendations :

- HPV vaccines are licensed for use in females aged 9-45 yrs ,however preferred target age group is 9-14 yrs.
- Vaccination in sexually active females may be less effective but may provide some benefit as exposure to all vaccine types previously is unlikely.
- Females aged 15- 25 yrs should be considered for catch-up vaccination program only if resources are available.

Dosing Schedules:

- Two dose series: 2 doses 6 months apart for those who initiate vaccination at ages 9 -14 yrs.
- Three dose series: 0, 2mnths and 6 months for those who initiate at ages 15 -26 yrs & for immunocompromised persons.
- Dosing schedules are extendable to 12-15 months in circumstances where second dose was not repeated within 6mnths.
- Older sexually active women should be counselled regarding reduced efficacy of HPV vaccine .Screening with pap smear is carried out as usual from 25yrs.

2V HPV & 3V HPV are no longer distributed in U.S.4v HPV & 9v HPV vaccines are only vaccines approved for males. A nonavalent vaccine 9vHPV vaccine, containing HPV31/33/45/52 and 58, in addition to 6, 11, 16 and 18, was licensed in December 2014 and approved by the ACIP for clinical usage in April 2015. The additional 5 serotypes are responsible for 10% of invasive HPV - associated cancers, 15% of cervical cancers and 25% of > CIN2. The safety profiles were similar in 4vHPV and 9vHPV vaccinees.

The ACIP has recommended the 9vHPV for females aged 13 through 26 years and for males aged 13 through 21 years who have not been vaccinated previously or who have not completed the 3-dose series. Males aged 22 through 26 years (MSM and the immunocompromised) may also be vaccinated. The ACIP recommends a 3-dose schedule for the 9vHPV. There are no data on efficacy/immunogenicity of fewer than 3 doses of 9vHPV.

NEW HUMAN PAPILLOMAVIRUS VACCINES:

- NANOVALENT VACCINE.
- L2 VACCINES.
- L1 CAPSOMER VACCINES.
- THERAPEUTIC VACCINES.

SPECIAL SITUATIONS

Victims of Sexual Abuse : ACIP (Advisory Committee on Immunisation Practices) and CDC (Centre for Disease Control) recommends HPV vaccination for both male & female sexual assault survivors aged 9-21 yrs & 9-26 yrs .The same 3-dose vaccination schedule is followed.

Administration In Older Age Groups : For women aged 25 to 45 yrs ,the first priority should be given to cervical cancer screening .Cervical cancer screening &HPV vaccination are not mutually effective.

Women With Abnormal Pap Smear / Positive HPV Test / Previous HPV Lesions : Women should be offered the vaccination being counselled about the lack of any therapeutic effects on existing pathology.

Vaccination - Pregnancy & Lactation : HPV vaccine should not be initiated during pregnancy. However if pregnancy occurs during the vaccination protocol, it is advisable to discontinue the schedule and continue the vaccine 6wks post delivery pregnancy. The vaccine is given in the postpartum period with n adverse effects on lactation.

Immunocompromised Patients : HIV positive girls should be advised to start HPV vaccination from 9-14 yrs according to prescribed 3 dose schedule.

THE INDIAN SCENARIO

India accounts for about 25% of all new cervical cancer cases and cervical cancer deaths occurring in the world. According to the 2013 Globocan data, in India, HPV16 and 18 account for 81.3% of all cervical cancer cases.

Hence a vaccine containing HPV16 and 18 is bound to be greatly beneficial. However numerous barriers exist in the path towards its acceptance in the National Immunization Program (NIP). Most data on disease burden is obtained from regional cancer registries, while population based data is scanty. Also, due to high cost, HPV vaccines are far beyond the reach of most Indians. Sociocultural issues associated with the HPV vaccine because it targets a sexually transmitted infection and primarily targets female adolescents and young adults are a great barrier.

While routine screening with Pap smear at regular intervals and early treatment of precancerous conditions in the developed countries have been very effective in preventing squamous cervical cancer, these measures are difficult to implement in low-resource settings. Thus, prevention of HPV infections by vaccination has assumed great public health importance.

Postpartum Depression: Handling Post Partum depression in Young Indian Moms

Pregnancy and puerperal period for most women is a time of well-being, but in certain vulnerable women, this can exacerbate or precipitate a psychiatric disorder. About 12 to 15% of women will experience postpartum depression (PPD). In India, about 20% of mothers experience depression in postpartum period.

PPD is a mood disorder that can affect women in the puerperal period. According to DSM-V, the onset of PPD can occur prior to or after parturition, usually within first four weeks of delivery. According to WHO's ICD-10, the onset is within six weeks of parturition. The symptoms are comparable to the features of major depressive episodes that occur outside of the postpartum period such as low mood, loss of interest or pleasure, change in appetite and weight, sleep disturbances, loss of energy and neurocognitive dysfunction.

Some women manifest mild depressive symptoms such as feelings of worry, unhappiness and fatigue after child birth, which is called postpartum blues or baby blues and it is generally self-limiting. However, in some patients these symptoms can become severe to result in postpartum depression. PPD impairs maternal functioning and is associated with poor nutrition and health in the offspring. It can interfere with breast feeding and impair bonding with infant. It is also associated with abnormal development, cognitive impairment and psychopathology in the children. It may also strain the marital relationship and can be severe enough to cause suicide in mother.

PPD can be screened for using Edinburgh Postnatal Depression Scale (EPDS), which is a 10 item questionnaire to identify women with PPD. PPD usually resolves with treatment which includes psychotherapy and pharmacotherapy with psychotropic medications. In patients resistant to pharmacotherapy, ECT is used along with psychotropic medications for better outcomes. However, in a significant proportion of patients PPD may develop into a persistent depressive disorder and studies suggest that episodes of PPD can last for at least one year in about 30 to 50% of patients. It has also been shown that patients who recover from PPD are at increased risk of recurrences. Therefore, it is important to identify and treat women with PPD as early as possible and to monitor them for any relapses.

During postpartum period, women are at increased risk of various other psychiatric illnesses as well including mood, anxiety and psychotic disorders and puerperal psychosis is one of them.

Postpartum psychosis (or puerperal psychosis) is most often seen in patients who have been or will be diagnosed with bipolar disorder, but can also occur in women with a major depression with psychosis, schizophrenia or schizoaffective disorder. Postpartum psychosis (PPP) is very rare, with a prevalence of 1 to 2 per 1000 births. It is far less common than postpartum depression and postpartum blues. This usually presents within two weeks of delivery and manifests with hallucinations and delusions with thought disorganisation and bizarre behaviour. It is a medical emergency which requires rapid intervention and hospitalization as well as comprehensive medical evaluation and psychiatric management.

In summary, PPD and PPP are not uncommon during pregnancy and postpartum period and should be carefully evaluated as they have good prognosis with timely treatment. Patients should be followed long term to watch for any recurrences.

Edinburgh Post Partum Depression Scale

I Have Felt happy :

- ☐ Yes, all the time
☒ Yes, most of the time
☐ No, not very often
☐ No, not at all

This would mean : "I have felt happy most of the time" during the past week. Please complete the other questions in the same way.

In the past 7 days :

1. I have been able to laugh and see the funny side of things :

- ☐ As much as I always could
☐ Not quite so much now
☐ Definitely not so much now
☐ Not at all

2. I have looked forward with enjoyment to things :

- ☐ As much as I ever did
☐ Rather less than I used to
☐ Definitely less than I used to
☐ Hardly at all

3. I have blamed myself unnecessarily when went wrong :

- ☐ Yes, most of the time
☐ Yes, some of the time
☐ Not very often
☐ No, never

4. I have been anxious or worried for no good reason :

- ☐ No, not at all
☐ Hardly ever
☐ Yes, sometimes
☐ Yes, very often

5. I have felt scared or panicky for no very good reason :

- ☐ Yes, quite a lot
☐ Yes, sometimes
☐ No, not much
☐ No, not at all

6. Things have been getting on top of me :

- ☐ Yes, most of the time I haven't been to cope at all
☐ Yes, sometimes I haven't coping as well as usual
☐ No, most of the time I have coped quite well
☐ No, I have been coping as well as ever

7. I have been so unhappy that I have had difficulty sleeping :

- ☐ Yes, most of the time
☐ Yes, sometimes
☐ Not, very often
☐ No, not at all

8. I have felt sad or miserable

- ☐ Yes, most of the time
☐ Yes, quite often
☐ Not, very often
☐ No, not at all

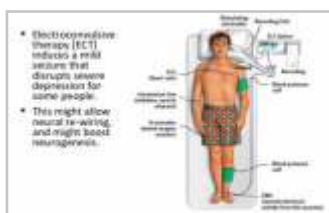
9. I have been so unhappy that I have been crying :

- ☐ Yes, most of the time
☐ Yes, quite often
☐ Only occasionally
☐ No, never

10. The thought of harming myself has occurred to me :

- ☐ Yes, quite often
☐ Sometimes
☐ Hardly ever
☐ Never

Electroconvulsive Therapy (ECT)



Women's Imaging and Intervention

The growth and development of the baby starts right from the time mother becomes pregnant. In December 2017, KMCH created a separate unit, the Fetal medicine clinic, on the 5th floor which is dedicated to antenatal imaging and separate from the routine abdominal ultrasound. Staffed by a team of Doctors who have done extra fetal medicine imaging courses, the center does only antenatal cases with dedicated higher end USG with 3D/4D capability and procedure rooms and counselling services for invasive and non-invasive testing. Additionally a wide bore 1.5 Tesla MRI is present for fetal MRI scans.

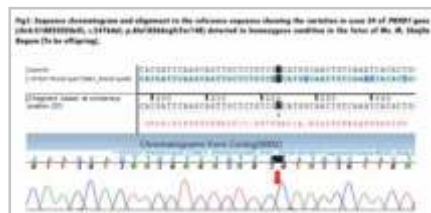
The various services offered at our center are

- Screening services - USG, Fetal ECHO, Fetal MRI, Neurosonogram
- Diagnostic services - Amniocentesis, Chorionic Villous Sampling
- Therapeutic services - Genetic counseling, fetal reduction, Fetoscopy guided procedures

Although it is difficult to interpret Western Research Data into Indian context as in US and UK, Fetal medicine is done by a separate 3 year Maternal – Fetal medicine training for high risk pregnancy and ,in India, Fetal medicine is largely OBGyn and radiologists with additional training. The data does suggest that the scanning team working with OBGyn capable of handling of complex cases does improve outcomes in high risk cases. The KMCH fetal medicine center is designed to work like a collaborate effort with the referring OBGyns

When a suspected anomalous case is referred, the higher end USG and Fetal MRI with higher end resolution can actually prevent unnecessary MTP. If something is truly anomalous, the Fetal medicine doctor consults with the referring specialist for additional planning. Genetic counsellor is on hand for further management.

We would like to highlight the role of these evaluation from a case we encountered where the parents had a previous pregnancy; intra uterine death at around 5 months. Fetal autopsy revealed that the fetus was affected with Autosomal Recessive polycystic kidney disease. Parents were of third degree consanguinity; Whole exome sequencing showed both of them to be carrier for PKHD 1 gene which is the culprit gene causing ARPKD. During the second pregnancy , the fetus was structurally normal at 12 weeks showing normal kidneys. In view of the risk of 25 % inheritance, invasive testing was done and the fetus was homozygous for that particular gene. Termination could be offered at an earlier period as it was an affected fetus.



Gene Name	Exon / Intron	Variation reported by NGS	Variation detected in family member*
PKHD1	Exon 34	chr6:51882352delC (HET); c.5476del, p.Ala1826ArgfsTer148	Present (Homozygous)



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Role of Fetal MRI - A Problem Solving Tool

Ultrasound has its own limitations. Inter observer variability, poor image quality in obese individuals, position of the fetus to image its various organs and oligohydramnios have been a major setback. Fetal MRI helps to overcome these problems. Whenever anomalies are diagnosed, the decision to terminate the pregnancy or to do fetal interventions based on one modality has always been an issue. Fetal MRI has emerged as a problem-solving tool in such situations.

MRI being non-ionizing, is a suitable cross-sectional imaging modality for the fetus but in the past, it was challenging because the fetus was in continuous motion. Now with the advanced technology and development of faster sequences, MRI has emerged as a problem-solving tool for evaluation of fetal anomalies. Sequences which can be completed in less than 1 min are available with the advanced scanners. Sequences with interleaved images which are unaffected by fetal movement are also possible. Slices as thin as 2 mm can be obtained.

KMCH now has a state of the art 1.5 T MRI machine with a wide bore, which allows the pregnant mother to comfortably lie within the machine at ease either on her back or onto one side. Dr. Sumathi Natarajan, the Lead Consultant of Fetal medicine division of Radiology department, KMCH was at Vienna to attend the 27th World congress of ISUOG, 2017. The highlight of the conference was the fetal MRI workshop. After a decade of research on various applications of MRI in evaluation of the fetus, novel clinical applications have been approved by ISUOG this year. ISUOG (International Society of Ultrasound in Obstetrics and Gynecology) has set guidelines for indications of fetal MRI. Most relevant of those are 1. Isolated ventriculomegaly, Corpus callosal agenesis, Absent cavum septum pellucidum 2. Posterior fossa anomalies, microcephaly 3. Neural tube defects 4. Diaphragmatic hernia, lung anomalies 5. Multiple malformations 6. Complicated monochorionic twins

Evaluation of fetal brain is the most common and important of all. With its inherent soft tissue characterization, MRI can delineate the different layers of the developing brain. This helps in recognizing abnormalities like Lissencephaly and organization disorders. Sulcation abnormalities are very clearly depicted with MRI. Special sequences like Susceptibility weighted images (SWI) can pick up tiny foci of hemorrhage or calcification.

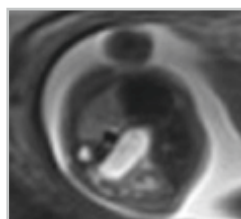
Another significant role of MRI is evaluation of fetal lungs in cases of Congenital diaphragmatic hernia. MRI clearly differentiates between the fluid filled bowel loops and the lung parenchyma which is compressed. Ratio of the volume of the opposite lung to the fetal head circumference (LHR) is a very specific prognostic marker, in timing the delivery and for the need for ECMO immediately after the delivery.

In cases of lung anomalies like CPAM (Congenital pulmonary airway malformation), MRI helps in delineating the diseased lung segments from the normal lung and hence in prognostication. Meconium in the bowel loops appear hyperintense on T1W images and its absence indicates bowel abnormalities. MRI can be used also for evaluation of abnormally invasive placenta and maternal conditions like ovarian and adnexal pathologies.

In case of monochorionic twin gestation, MRI helps in evaluating the vasculature of the placenta and the fetal brain for ischemia after fetoscopic laser guided placental dichorionisation. MRI also helps in confirming equivocal findings in ultrasound, especially in cases of inter-observer discrepancies.

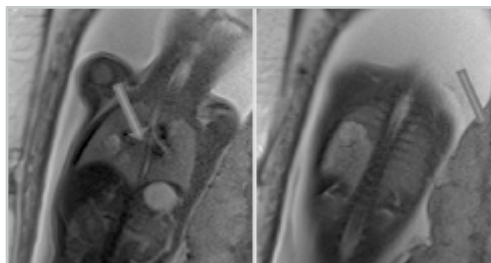


1a. Transverse USG image of fetal abdomen

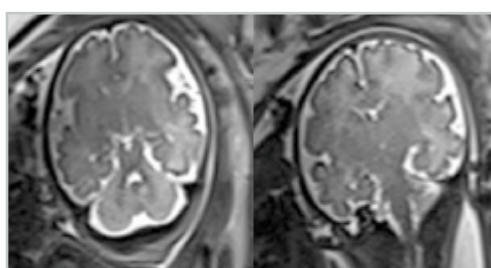


1b. Axial T2 W image of fetal abdomen at same level

Case of left sided diaphragmatic hernia; diagnosed with USG at 20 weeks anomaly scan. USG was not able to differentiate between the compressed lung and the herniating bowel loops. MRI clearly delineated the fluid filled T2 hyperintense bowel loops (arrow) from the lung. The fetus had a poor prognostic index and hence was terminated.



Case of Congenital pulmonary airway malformation of right lung lower lobe which appears hyperintense on T2 weighted images.



Coronal T2 W HASTE images of a 32 weeks normal fetal brain. MRI clearly depicts the layers of cerebral cortex and brain sulcation.

Postmenopausal Osteoporosis - An Overview

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Osteoporosis is an asymptomatic or “silent” disease and is considered as a serious public health concern. Currently it is estimated that over 200 million people suffer from this disease worldwide (1). Ageing of population has been responsible for the increasing incidence of osteoporosis especially in postmenopausal women (2). With average life span extended to 70 years most women will spend more than one third of their life time beyond menopausal transition and approximately 46 million women are expected to be osteoporotic in India (3). Since 1960’s a link between menopause and osteoporosis was first identified many researches have thrown light into this global epidemic.

WHO defines osteoporosis as “a systemic skeletal disease characterised by low bone mass and micro architectural deterioration of bone tissue with a consequent increase in bone fragility and susceptible to fractures involving the wrist, spine, hip, pelvis, ribs and humerus”. Primary osteoporosis is seen in post-menopausal women in whom there is no specific pathogenic mechanism other than age. There is accelerated bone loss at the rate of 2-5% per year in the first 5-7 yrs after menopause.

Poor nutritional status is an important risk factor for osteoporosis. Body weight <60 kgs and height <155 cm may significantly increase the risk of osteoporosis in women. Number of studies have demonstrated a positive correlation between body mass index and BMD. Indian council of Medical Research recommends dietary allowance of 600mg/d of calcium for adult women. Bioavailability of calcium from dairy sources is much higher than non dairy sources. Physical exercise especially weight bearing exercises help to improve and maintain muscle and bone strength. Long term glucocorticoid use by elderly population has been reported as a major contributor for prevalence of osteoporosis in elderly Indian population.

Although Peak Bone Mass (PBM) is achieved by 25-30 yrs, 40-50% of bone mass is accumulated during pubertal years and 80% is achieved

by the age of 18 yrs. Genetic factors, race and ethnicity have a strong influence on peak bone mass. Asian women have been shown to have lower BMD than their caucasian and black counterparts (5). Association between vitamin D receptor gene polymorphism and oestrogen receptor alpha gene polymorphisms with BMD in postmenopausal women have been demonstrated in several studies.

Bone Mineral Density (BMD) is a good surrogate marker of bone strength and fracture risk. The mortality adjusted lifetime risk of fracture for women with a T score less than and equal to -2.5 is 65% (95% confidence interval). WHO diagnostic criteria have been validated using DXA of spine and hip, so T score from peripheral skeleton or other techniques (CT, ultrasound) are not interchangeable. Exclusively BMD based diagnostic approach does not include extra-skeletal risk factors like the propensity to fall.

WHO criteria for diagnosis of osteoporosis are derived from caucasian population and presently normative data for Indians are emerging. Current reference range of the DXA machines are based on the database of the NHANES III reference range. It is possible that applying these criteria, substantial number of patients may be over diagnosed and over treated. Indian menopausal society advises to set the intervention threshold to -3 to prevent over treatment.

Once fractures happen they result in pain and disabilities and henceforth prevention is critical in this disorder. Diet rich in calcium (1000 - 1200 mg/day), sunlight exposure (achieving 800-1000 IU/day), regular weight bearing exercises and prevention of falls to avoid fragility fractures. Fracture risk (FRAX) of a patient can be estimated as low (<10% in next 10 yrs), moderate (10-20% in next 10 yrs) or high (>20% in next 10 yrs) using known risk factors and femoral neck BMD.

Treatment with calcium with or without vitamin D is the first line treatment and reduction of fractures is significantly greater where compliance is high, atleast 1200mg calcium and 800IU of vitamin D supplemented. Bisphosphonates is recommended for treating post-menopausal women with proven efficacy in the prevention of vertebral and non-vertebral fractures, including hip fracture. Alendronate daily, Risedronate weekly, ibandronate monthly and Zoledronic acid yearly are commonly used.

Window of opportunity hypothesis states that when Menopausal Hormone Therapy (MHT) is started in women less than 60yrs or less than 10 yrs postmenopausal, the overall benefits outweigh risks like breast cancer, coronary heart disease, strokes and thromboembolism. Contrarily if started for women more than 60 yrs or longer than 10 yrs after menopause there is a null effect and sometimes even adverse effect. With the reservations about MHT, Multiple Outcomes of Raloxifene Evaluation (MORE) has shown efficacy of Oestrogen receptor modulator by reducing vertebral fractures by 60% who are at risk of subsequent fractures (6). Calcitonin administered as daily intranasal spray as anti-resorptive treatment has been associated with significant improvement in back pain and quality of life among post-menopausal Indian osteoporotic women (7). Intermittent parathyroid hormone (PTH) is a bone anabolic therapy and believed to reduce fracture risk to a greater extent than anti-resorptive therapies (8). Receptor activator of nuclear factor - kappaB ligand inhibitor works by inhibit osteoclast formation and is the latest in the arsenal against post-menopausal osteoporosis.

In India, Calcium, Vitamin D and bisphosphonates are the commonest first-line therapies for post menopausal women and other modalities are decided based on affordability and availability of treatment options.

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Long Pulsed Nd Yag 1064nm Laser In Hirsutism

Dr. S. Pavithra MBBS., MD., Consultant Dermatologist & Cosmetologist



Hirsutism is defined as the presence of terminal coarse hairs in females in a male-like distribution. It affects around 5-10% of women and is a common presenting complaint in the dermatological out patient department (OPD) for cosmetic reasons.

The cause is mainly hyper and rogeneism, which may be ovarian or adrenal. It may be part of a rare metabolic syndrome, drug induced, or just idiopathic. Hirsutism has a huge psycho social impact, It is not only imperative to identify the cause of hirsutism but also important to know how to recommend the right treatment based on the main causative factor especially in the young females

Classically, hirsutism has been considered a marker of increased androgen levels in females from increased production of androgens (i.e testosterone) either by the adrenals or due to an ovarian disease and hence these patients require in depth clinical evaluation and treatment.

While hormonal therapy is generally successful in halting the further progression of disorder, steps need to be taken to reverse the hair growth process simultaneously in order to help patients gain their self esteem and social confidence and reduce the psychological stress from unwanted hair growth.

Most women resort to removal of hair by different epilation methods, such as plucking, shaving, and waxing before presenting to the clinic. Though simple and inexpensive, these methods are temporary and have their own side effects like physical discomfort, scarring, folliculitis, irritant dermatitis or discoloration and thus should be strictly discouraged. Electrolysis has also been used for the removal of the hair. With repeated treatments, the efficacy ranges from 15 to 50% permanent hair loss. However, it is difficult to treat large areas like hairs on the chest or upper back with electrolysis and it can be time consuming.

Lasers have gained wide popularity in past two decades and can achieve permanent reduction of hair (not removal). They work on the principle of selective photothermolysis where the laser energy acts specifically to destroy the target (melanin).

With the advent of longer wavelength, longer pulse durations and efficient cooling devices, the currently available laser machines can now be used safely for all skin phototypes. The two wavelengths which can safely be used for laser hair reduction on darker skin types are the diode (810 nm) and Nd: YAG (1064 nm). In terms of efficacy, the shorter wavelength (diode) laser is generally regarded as more effective because of 'melanin's higher absorption value which decreases with increasing wavelength. However, the longer wavelength Nd: YAG laser is considered ideal for treating patients with darker skin, due to reduced scatter and deeper penetration of the laser light. Also, shorter pulse durations can be more safely used with the Nd: YAG laser than with the diode. This is an additional advantage when dealing with finer hair with shorter thermal relaxation time (TRT).

Unwanted body hair can represent a severe cosmetic disturbance. In recent years, not only people with hirsutism and hypertrichosis, but even those with normal distribution of unwanted hair seek long-term laser hair reduction.

Although several dermatologic lasers meet the wavelength criteria for effecting selective follicular destruction, the treatment of darker skin phototypes is particularly problematic because follicular melanin serves as the intended chromophore for laser epilation. Thus, absorption of laser energy by the targeted hairs is compromised by an increased concentration of epidermal melanin in these patients. To reduce epidermal energy absorption relative to follicular absorption, longer-wavelength lasers are best used. The 1064-nm Nd:YAG laser can penetrate from 5 to 7 mm into the dermis,



depths more than sufficient to reach the base of the bulb in most anatomical areas, and would thus be expected to produce sufficient follicular injury with less epidermal damage in patients with pigmented skin.

Hairs grow in three distinct stages: anagen (active), catagen (regression) and telogen (resting). During the anagen phase, a hair is actively growing as the cells in the root divide rapidly and add to the hair shaft. The catagen phase is the period of time when growth slows and the hair root begins to die. When a hair reaches the telogen phase, all growth has stopped and the hair reaches the peak of its development

Multiple sessions undoubtedly yield more effective results because lasers can only target the anagen or active phase of the hair growth cycle. At any given time, only 50–65% of facial hair is in the anagen phase for a duration of 3 – 4 weeks. Therefore, even if 100% of all anagen hairs are destroyed after each treatment, only a percentage of the total hair would be eliminated. The same holds

true for each successive treatment and hence, multiple treatments are required to achieve the best case scenario.

Regarding the safety and efficacy long pulsed Nd yag laser is considered as one of the safest lasers for hair removal especially in dark skin individuals due to its longer wavelength and less epidermal absorption and yields better results .

Hence long pulse Nd yag laser with a wave length of 1064nm along with hormonal therapy can be one of the excellent combination therapy for patients with hirsutism . While the hormonal therapy takes care of the internal disorder, the laser simultaneously helps in improved physical appearance of the patients for a better quality of life.

Maternal and Fetal Outcome of Dengue In Pregnancy - A Retrospective Study

Dr. Velam Thennavan MBBS., DFFP, MRCOG (London), Consultant Obstetrician & Gynecologist



The increasing incidence of adult dengue fever has led to the increase in number of infected pregnant women. Dengue, during pregnancy may be associated with various maternal complications like miscarriage, preterm delivery, maternal death & fetal complications includes fetal anomaly , low birth weight & intra uterine death. The aim of the study is to assess the clinical profile, maternal and fetal outcome of dengue in pregnancy.

A Retrospective study was carried out among the ante natal patients who were serologically confirmed dengue fever with ELISA during a period of 12 months (JAN 2017 – DEC 2017) in KMCH. Patients were included irrespective of the period of gestation and they were followed up till delivery and all babies were followed up to six weeks postpartum.

60 antenatal mothers were admitted with dengue fever in a period of one year. 8.3% (n=5) affected in first trimester 36.6% (n=22) in second trimester 55% (33) in third trimester. 5 cases were DHF (8.3%) and 2 cases were DSS (3.25%) 53 were dengue fever In that Thrombocytopenia (< 1.5 lakhs/mm³) was found in 66.6% (N = 40) of which 8.2% had platelet count below 25,000 which required transfusions. 6.5% had spontaneous miscarriage , 9.5% had preterm delivery , 8.2% diagnosed as oligohydramnios, one patient died of dengue shock syndrome (0.6%).

In our study 12 patients had preterm delivery and premature babies required ICU admission. One case of Intra uterine fetal death noted in our study. The gestational age at presentation of dengue fever appeared to be significant.early onset or late onset in pregnancy appeared to have a bad prognosis. A high suspicion is essential in any pregnant female with fever during epidemics especially in endemic areas like tamil nadu.

Case Report - Caesarean Scar Ectopic Pregnancy

Dr. R. Renukadevi MD., (O&G) DNB., Consultant Obstetrician & Gynecologist



27 Years G2P1L1, previous LSCS with 55 days of amenorrhoea, conceived with ovulation induction drugs, came for routine antenatal check-up. Transvaginal scan showed single intrauterine sac measuring (MSD -1.87mm) of 7 weeks size with no fetal pole in the lower endometrial cavity with extension along the previous scar suggestive of SCAR ECTOPIC PREGNANCY. Beta HCG level was 21,650 MIU/mu.

MRI reported that the gestational sac was situated within the endometrial cavity along the previous caesarean scar & maximum myometrial thickness over the sac was 1.5mm. Treatment Plan of Bilateral uterine artery chemoembolization followed by surgical evacuation (suction & evacuation / laproscopic excision/ laparotomy) was

discussed with the Patient and the relatives and intra-op complications like excessive bleeding, uterine perforation & need for hysterectomy was explained.

Day 1, chemoembolization was performed i.e 50 mg intra-arterial methotrexate was injected in both the uterine arteries (25 mg each) followed by embolization using PVA-particles. Surgical evacuation was planned after 24 hours. Day 2, USG guided, Suction & evacuation was attempted under general anesthesia. Due to myometrial invasion, the sac could not be evacuated. Procedure was converted to laparotomy for safe evacuation.

Laprotomy was performed, uterus exposed. The scar was thinned out over the ectopic implantation site. Hysterotomy was performed and sac along with the products of conception was removed. Uterus was closed with 2-0 vicryl. Estimated blood loss during the procedure was minimal ~ 50 ml. The procedure was uneventful. Patient was discharged on Day 4 with no complications. A monthly follow up of Beta hCG was kept. It reached to non-pregnant value after 2 months of procedure.

Uterine artery chemoembolization along with surgical evacuation is safe and effective method of treating scar ectopic pregnancy. It minimizes intra-operative blood loss, preserves fertility as need for hysterectomy rarely arises.



EVACUATION OF THE SAC



HYSTEROTOMY CLOSED



USG PICTURES OF SCAR ECTOPIC PREGNANCY

Chorioangioma of Placenta: A Rare Cause for Adverse Fetal Outcome. Case Report

Dr. Velam Thennavan MBBS., DFFP, MRCOG (London), Consultant Obstetrician & Gynecologist



Introduction : Chorioangioma is most common benign tumour of placenta derived from primitive chorionic mesenchyme. The incidence of chorioangioma is 0.6-1%. Rare placental causes affecting fetal outcome are partial mole, chorioangioma, and placental teratoma. Large chorioangioma above 10 cms has adverse effects on both mother and fetus. We report a huge chorioangioma resulting in polyhydramnios, preterm labor¹.

Case report : A 25 year old G2P1L1 with 30+4 wks of gestation with previous Lscs came for regular ANC visit. On examination vitals stable. P/A uterus size more than period of gestation relaxed breech presentation, fhs good no scar tenderness. USG shows SLIUG of 30+4 wks with Polyhydrominos . Placenta anterior grade II maturity with a large echogenic mass of 9.2*7cms suggestive of placental Choriangioma with fetal anemia and umbilical varix with mild cardiomegaly. Antenatal steroids were covered and planned for elective LSCS, Delivered a live preterm female baby of wt 1.6kg. Post op uneventful. Baby discharged on day 14.

Clinical Features and Complications : Tumors of more than 5cm risk of maternal and fetal complications are most likely maternal morbidity of 30%¹. Large tumors probably act as arteriovenous shunts and cause complications. Maternal complications are preeclampsia, preterm labour, placental abruption, and polyhydramnios. Fetal congestive heart failure may develop because of the increased blood flow through the low resistance vascular channels in the chorioangioma acting as an arteriovenous shunt. Other associated complications are non immune hydrops, hemolytic anemia, congenital anomalies, fetal thrombocytopenia, cardiomegaly, and growth restriction³. Maternal serum alpha fetoprotein increases which is due to fetomaternal haemorrhage .

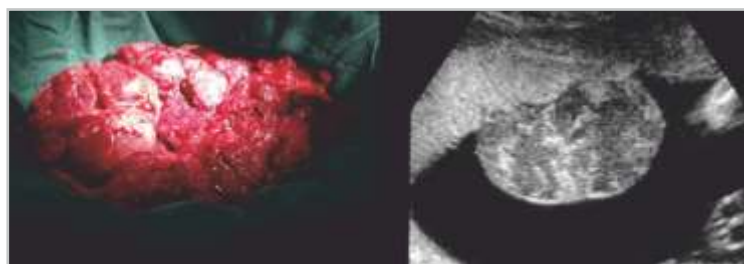
Ultrasound Diagnosis : The first case of chorioangioma was described by Clarke in 1978. USG shows are well-defined echogenic mass different from the rest of placenta and tumor protrudes into amniotic cavity near umbilical cord insertion³. On Doppler, feeding vessel usually has same pulsatile flow as that of umbilical artery but may have arteriovenous shunt causing low resistance flow ³.

Interventions : Chorioangioma with complications before fetal viability requires interventions. Various techniques with varying success rates have been tried such as serial fetal transfusions, fetoscopic laser coagulation of vessels supplying the tumor, chemosclerosis with absolute alcohol and endoscopic surgical devascularization. Polyhydramnios is treated with therapeutic amniocentesis and maternal indomethacin therapy. Steroid administration for acceleration of fetal lung maturity before 34 weeks is indicated.

Prognostic Factors : Large chorioangioma associated with polyhydramnios leads to high perinatal morbidity and mortality, like in this case. Postpartum hemorrhage is a well known complication in mother.

Differential Diagnosis : Chorioangioma is often confused with placental teratoma, degenerated myoma, and blood clot. Chorioangioma is differentiated from the rest by demonstration of vascular channels similar to fetal vessels. Echo pattern of blood clot differs with time, while chorioangioma remains same. Partial mole has diffuse pattern and myoma is seen in maternal surface .

Conclusions : High fetal death in a case of large chorioangioma warrants institutional and timely delivery as seen in our case. Antenatal diagnosis is by ultrasound, and Doppler would have been the investigation of choice in accurate diagnosis of chorioangioma. Regular follow up helps in timely diagnosis and intervention.



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Fibroids - The Usual Treatment In An Unusual Patient

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A 42 year old Sudanese lady, presented with a history of menorrhagia and profuse intermenstrual watery discharge pv. Her cycles were regular, but she had severe menorrhagia associated with dysmenorrhoea. She was engaged to marry and wished to preserve her uterus for future childbearing. She had previously undergone myomectomy to remove multiple fibroids of the uterus in 2013. Her general examination was unremarkable, but her gynecological examination revealed that the patient had undergone a partial female genital circumcision (also called FGM or female genital mutilation according to the World Health Organization and is a banned practice.

In her case, the patient had a type 2 FGM where her clitoris was absent with midline fusion of labia minora in the anterior part of the vulva. Urethra was not seen (and was underneath the hood created by the midline fusion as seen while examination under anaesthesia). Introital opening showed an intact hymen and vaginal examination was not done.

MRI showed that a uterus measuring 15 x 11 x 8 cm, with a pedunculated lesion extending from fundus and into vaginal canal measuring 12 x 8.9 x 6.6 cm with contrast enhancement with the impression being an Endometrial polyp, with the possibility of Carcinoma of Endometrium. There were multiple fibroids, intramural, measuring 2 to 3 cm in size. The rest of her pelvis and abdomen were normal to the extent seen.

In this case, the usual protocol would have been a preoperative out patient biopsy from the polyp to rule out malignancy and then making a surgical plan. That option was negated by the patient. Hence, it was decided to proceed with a plan of EUA (Examination under anaesthesia) and biopsy of the polyp for frozen section to rule out malignancy. If found benign, then to proceed with a polypectomy and abdominal myomectomy for removal of the intramural fibroids. The surgery went as planned as the frozen section report was suggestive of a fibroid polyp. The challenge was two fold - the first was in removing the vaginal polyp which was measuring approximately 12x10cm and was arising from the posterior aspect of the endocervical canal, without damaging the altered external genitalia. This was accomplished by using the smallest size of vaginal speculums and morcellating the polyp into small bits, which was a painstakingly slow process. The polypectomy was completed with a few small superficial tears to the labial folds. The second challenge was to remove the fibroids from a uterus which was buried under adhesions secondary to the previous laparotomy and her current pelvic endometriosis. But at the end of a 5 hour surgery, six fibroids ranging from 2 to 5 cm were removed and her uterus sutured back to normal. Her left ovary and tube were released from adhesions, endometriotic collection drained and restored to as normal anatomy as possible. Right ovary and tube could not be seen.

Patient was discharged on the third post operative day and flew back to Sudan on the 6th POD as she was fit and well. It remains to be seen if she will conceive as her chances of a spontaneous pregnancy would be low due to her age, the uterine and pelvic surgery, endometriosis and the future risk of recurrent fibroids. This case was interesting for the fact that the patient got to have her choice of having her uterus preserved, but her fibroids treated successfully, (atleast for the time being) despite the surgical challenges.

Case Report



A 28 year old female presented to OPD with low mood, loss of interest in her usual activities, fatigability and sleep disturbances, which started 2 weeks after the birth of a healthy male baby. This was her first pregnancy and the mode of delivery was caesarean section. In the further course of the illness, she developed psychotic symptoms (delusions and auditory hallucinations) along with suicidal thoughts. There was no significant past psychiatric history.

After initial evaluation to rule out organic causes, she was diagnosed to have postpartum depression (PPD) and was admitted in mother and baby unit for further management. She was treated with antidepressants and antipsychotics.

However she did not respond to the pharmacological therapy and so she was started on electroconvulsive therapy (ECT) along with medical treatment. Her symptoms gradually improved with this treatment and she completely recovered later.

Scar Endometriosis : A Rare and Enigmatic Disease

Dr. Atima Pathak MS (Obs & Gyn), Consultant Obstetrician & Gynecologist



Introduction :

Endometriosis is described as the presence of functioning endometrial tissue outside the uterine cavity.

Scar endometriosis is a rare disease and difficult to diagnose.

The symptoms are non-specific, typically involving abdominal wall pain at the incision site at the time of menstruation. But only 20% patients exhibit such symptoms.

The diagnosis is frequently made only after excision of the diseased tissue.

Background :

Scar endometriosis has much rarer incidence (fewer than 1% of affected patients).

The incidence of it has been estimated to be 0.03% to 0.15% of all cases of endometriosis.

Case Report :

A 27 years old, PqL2, sterilised, post-hysterectomised, previous 2 LSCS, patient presented with c/o lower abdominal pain involving the scar site of previous surgeries since last 2 years. On examination, vitals stable, Per abdominal examination : firm tender mass of 7 × 6 cm felt at lower abdomen (left side of scar of previous incision site).

Pelvic and per rectal exam in normal limits.

Investigations : Blood parameters are normal.

Ultrasonography abdomen and pelvis : s/o hypoechoic solid mass lesion with vascularity in intramuscular plane in suprapubic parietal wall.

Trucut biopsy : s/o fibromatosis.

CT scan : s/o 8.5 × 5.5 × 3.5 cm irregular hyperdense lesion in rectus abdominis, no calcification.

Management : wide excision of mass with reconstruction of anterior abdominal wall with sepramesh done.

Cut-section of specimen : s/o fibromatosis.

Histopathology Report : s/o densely fibrotic lesion with chronic inflammation and many scattered endometrial glands with accompanying stroma with few Glandular cells suggestive of endometriosis.

Discussion :

Anterior abdominal wall scar endometriomas are most commonly seen after procedures on uterus and tubes. Cesarean scar endometriosis is the most frequently reported form of this disorder and is usually benign, although malignant transformation has been reported. As enigmatic as pelvic endometriosis has proven to be, extra pelvic endometriosis is unquestionably rarer, more difficult to diagnose and treat, and has certainly been less well studied. It is easily confused with other conditions, such as keloids, hematoma, stitch granuloma, abscess, primary or metastatic adenocarcinoma, nodular melanoma, cutaneous endosalpingosis, and inguinal and incisional hernia. The literature reports that the average time from surgery to clinical presentation may vary from 3 months to 12 years in different cases, which leads us to support the hypothesis that the mechanical migration theory plays an important role in the development of the disease, since it appeared on the cesarean and laparoscopy scar (a low-resistance point) after many years of primary surgery. Scar endometriosis is explained by the migratory pathogenesis theory wherein the endometrial tissue is dispersed by vascular and lymphatic channels due to surgical manipulation. The late onset of symptoms is the usual cause of misdiagnosis. The diagnosis of scar endometriosis based solely on data from the history and clinical examination is difficult, especially when they have atypical noncyclical pain as in our first case. High degree of suspicion is necessary to diagnose rectus sheath endometriosis substantiated by imaging modalities. The literature reports the use of sonographic and color Doppler examinations, fine needle aspiration, computer tomography, and magnetic resonance tomography in addition to the clinical data, which

substantially help to reach a reliable preoperative diagnosis. There is always a chance of the coexistence of pelvic endometriosis causing pelvic pain. There are no recommendations or guidelines to perform simultaneous laparoscopy to diagnose coexisting pelvic endometriosis while performing a local excision.

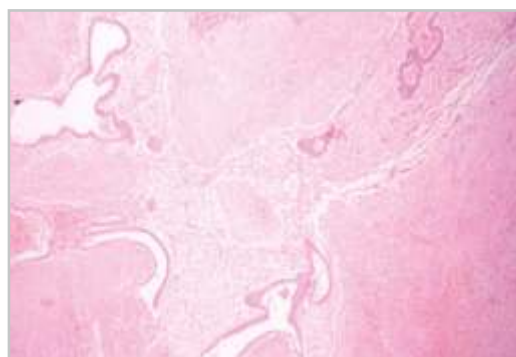
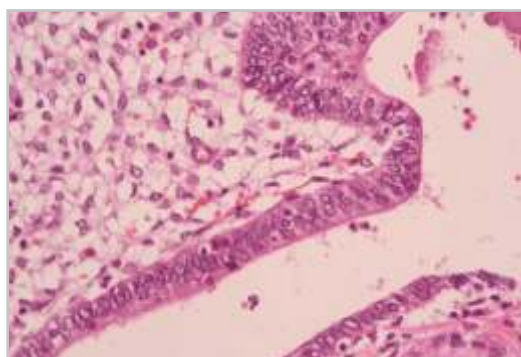
Numerous medical lines of treatment using newer progestogens, danazol, oral contraceptive pills and gonadotrophin - releasing hormone agonists have been tried with partial response and recurrence on stopping drugs, requiring more definitive treatment that is wider local surgical excision.

These patients need to be followed up because of the chances of recurrence, and rarely a new lesion at another site as observed in our case, which required re-excision. In cases of continual recurrence and long - standing recurrence, possibility of malignancy needs to be ruled out. As the rates of cesarean delivery are increasing day by day, it is important for clinicians to know the early diagnosis and optimal management of this enigmatic scar endometriosis.

Good clinical practice techniques and proper care during primary surgery may help in preventing endometriosis. It has been suggested that at the end of surgery especially on uterus and tubes, the abdominal wall wound should be cleaned thoroughly - irrigated vigorously with high jet solution before closure. However, no published randomized trials are available on

Conclusion :

Anterior abdominal wall scar endometriosis poses a challenge for diagnosis and treatment, in view of varied manifestations and recurrence, remaining as an enigma. These interesting cases add on to the scientific knowledge as they have an atypical presentation of extra pelvic endometriosis, compelling us to think about the genetic tendency of these patients toward recurrence and need of high index of suspicion for diagnosis, need of follow-up and prevention of recurrence at incisional site.



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Published by : Kovai Medical Center and Hospital, Coimbatore, Tamil Nadu, India.