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HIGHLIGHTS

LINGUAL PAPILLARY THYROID CARCINOMA WITH BILATERAL NECK NODE METASTASIS : A RARE CASE REPORT

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INTRODUCTION :

Incidence of ectopic thyroid tissue is 1 in every 100,000 to 300,000 in general population and lingual thyroid is the most common ectopic site (90%). In 70% of the cases it is the only functioning thyroid tissue. And 70% of lingual thyroid patients are associated to hypothyroidism and 10% to cretinism.

Till now only 51 cases of lingual thyroid cancer have been reported in the literature.

We are reporting a case of lingual thyroid carcinoma with bilateral cervical metastasis and absent orthotopic thyroid gland. In our case we approach the tumor via midline lip splitting with lateral mandibulotomy approach which provides us a good exposure of the entire oropharynx (tumor). We have managed the tumor according to the guidelines of differentiated thyroid cancer because of non availability of guidelines for ectopic thyroid cancer. After surgical excision of lingual thyroid and neck dissection radioiodine therapy was given.

The surgical approach to a lingual thyroid cancer as well as adjuvant therapy and natural history remains to be ascertained due to the rarity of the disease. Lip splitting with lateral mandibulotomy and swing approach appears to give adequate exposure to lingual thyroid.

CASE REPORT :

A 45 year hypothyroid female patient presented with bilateral neck mass, oropharyngeal mass impending airway obstruction and drooling of saliva. She had been previously diagnosed as papillary carcinoma of lingual thyroid with neck node metastasis 5 years ago. She did not undergo any treatment for the same. On examination there was pallor and peripheral edema, no cyanosis. Local examination of oropharynx revealed a 4×4cm mass filling the oropharynx. There was bilateral neck nodes of approximate size 10×12cm (figure 1) but trachea was in the midline and easily palpable. Lab reports revealed gross hypothyroidism and anemia.

Thyroid Function Test: T3 = 0.229ng/ml, T4 = 0.780mcg/dl, TSH= 100ulU/ml.

CT Scan Report (Preoperative):

A large mass in the posterior 1/3rd of tongue (figure 2) anterior to epiglottis and bilateral enlarged neck nodal masses pushing the carotids and jugular veins to the mid line posterior to the pharynx. No thyroid gland anterior to the trachea could be identified. CT thorax revealed no metastatic disease.

Patient was treated with incremental thyroxine, supplemental oxygen and corticosteroid awaiting emergency tracheostomy if airway obstruction occurs. After 7 days of the thyroxine supplementation and correction of anemia with blood transfusion, she was taken up for surgery.

Intraoperative Details:

Bilateral comprehensive node dissection with level VI clearance was done. A lip splitting and Apron neck incision was given. Parathyroid and recurrent laryngeal nerves were identified and preserved in the paratracheal groove. A midline lip splitting, lateral madibulotomy swing approach was done to access the lingual thyroid which was excised. There was no pharyngocutaneous communication after excision. The raw area was left to heal by

Desk of the Dean

Another joint issue of SPANDAN is in your hands. Immense work of research and academics is undergoing in all the corners of Geetanjali University. It appears that very few departments are highlighting or reporting their work to the journal. Certain works reported in this issue may find them better placed in another national or international journal of repute. I, insist upon other departments, hither to not reporting their achievements should come forward to enrich the SPANDAN.

GMCH have taken a big leap towards medical education technologies and we find quite a few of its faculty members acquiring honors and advanced training.

SPANDAN thrives to remain the flag bearer of GU.

Dr. F.S. Mehta

Figure 1 -
Preoperative photograph
of patient

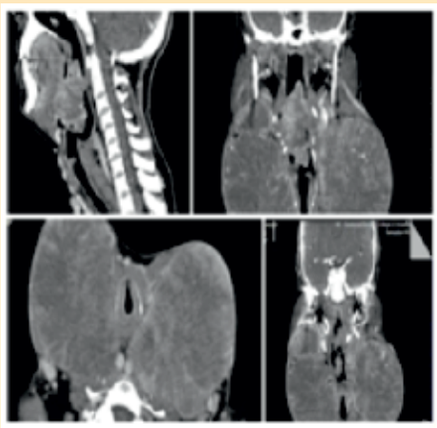


Figure 2 -
Preoperative CT Scan of Neck

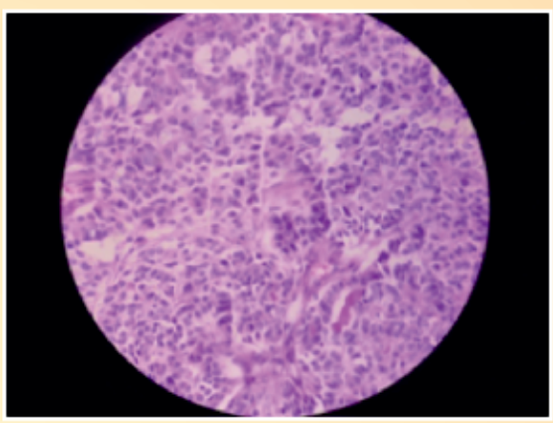


Figure 3 -
Papillary carcinoma of lingual thyroid
(40X magnification)

secondary intention. Mandibulotomy was closed with figure of eight steel wire.

She had an uneventful postoperative recovery with normal voice and swallowing. Supplemental thyroxine was continued postoperatively to facilitate healing and awaiting final biopsy report. She had no hypoparathyroid post operation.

Postoperative MRI showed no evidence of any lymphnode mass lesion or lingual thyroid.

Final Histopathology :

Dedifferentiated papillary thyroid carcinoma (figure 3) of lingual thyroid (4.5×2.9×2.9cm) with metastasis to bilateral neck nodes (right side 12×12×6cm and left side (10×10×8cm). Lymphovascular emboli were noted. Psammamatous calcification is noted.

Follow Up: Thyroglobulin done after 3 weeks of operation was >300 ng./ml. Patient took Radioiodine therapy thereafter and doing well after 6 months of follow up.

DISCUSSION :

Ectopic thyroid may be present at lingual, sublingual, thyroglossal, pre-tracheal, laryngotracheal and laterocervical10 and sometimes sub-mandibular, retroperitoneal and exceptionally at esophagus, mediastinum, heart, aorta, adrenal glands, pancreas, gall bladder and skin. It is very rare to find orthotopic thyroid gland in co-existence with ectopic one. Ectopic thyroid may represent metastasis from thyroid cancer and rarely may be a site for primary thyroid carcinoma. About 100 cases of ectopic thyroid carcinoma have been reported in the literature, mostly in thyroglossal duct and rarely papillary thyroid carcinoma(1% of all thyroglossal cyst carcinoma).

CONCLUSION :

The surgical approach to a lingual thyroid cancer as well as adjuvant therapy and natural history remains to be ascertained due to the rarity of the disease. Lip splitting with lateral mandibulotomy and swing approach appears to give adequate exposure to lingual thyroid.

Editorial

The Reports of the rare and interesting cases efficiently dealt with by our specialists enrich the scientific and academic worth of this issue of SPANDAN. The Contributors have been from different specialties. The work done and achievement of some of our faculty members have been outstanding to be rewarded and recognized. We are proud to operate the prestigious Bhamashah Swastha Bima Yojna of Govt. of Rajasthan and are committed for it. Glimses of the scientific, educational and other programmes and activities organized in our institutions are important contribution for this issue. Please keep on working and penning down the work done to enrich Spandan to carry the message to our medical as well as other readers.

Editor-in-Chief

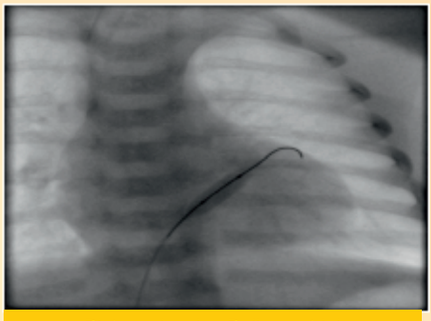
TRANSPOSITION OF GREAT ARTERIES - TGA WITH INTACT VENTRICULAR SEPTUM
Case report of a rare surgery

Dr. Sanjay Gandhi, Dr. Harish Sanadhaya, Dr. C.P. Purohit, Dr. Ramesh Patel, Dr. Manmohan Jindal, Dr. Kalpesh Mistry, Dr. Ankur Gandhi & Dr. Mahendra Jain.

Dr. Sanjay Gandhi

Transposed great Arteries (TGA) is a lethal Congenital heart disease(CHD) accounting for 5-7% of all CHD. Without treatment about 30% of these infants die in first week of life, 50% within first month, 70% within 6 month ,and 90% within one year .Incidence is 20 to 30/100,000 live births with strong male preponderance (70%).Increased prevalence is seen in infants of diabetic mothers or prenatal exposure to sex hormone therapy .

Baby in the CTVS ICU with Nasal CPAP and on multiple inotropes



Picture showing Balloon atrial septostomy procedure.

The basic anatomic abnormality in TGA is that aorta arise from morphologically right ventricle (RV) and Pulmonary artery arise from morphologically left ventricle (LV) . Thus the normal pulmonary and systemic circulation which are connected in series to each other are connected in parallel circulation. An associated Atrial septal defect (ASD), Ventricular septal defect (VSD) or Patent ductus arteriosus(PDA) is needed for blood mixing . But with those infants with intact septum without adequate mixing of blood can rapidly succumb as soon as their prenatal PDA closes un less intervention is done .

These infants usually present with cyanosis and acidosis in first few days of life or immediately after birth .

We at Geetanjali with the availability of a faculty and staff under one roof were able to deal with this baby and did this operation for the first time.

Our Case-

Two days old baby presented with history of cyanosis and tachypnea immediately after birth to a private hospital in Udaipur and then shifted to our institute for evaluation and management. Brought to Neonatal ICU and on investigation found to have complex congenital heart disease. Transpositon of great arteries with intact ventricular septum, patent formane ovale and closing PDA. Prostaglandins were started to keep the Ductus open for allowing mixing of blood but child kept on deteriorating and then we decided to do ballon atrial septostomy emergently on this 2 days old child weighing 2.4kg. Shifted the patient to Cath Lab and then did Balloon atrial septostomy and improved the saturation. After that Arterial switch operation was done on emergency basis to do the complete anatomical correction.

Balloon atrial septostomy (BAS)

BAS introduced by Raskind & Miller in 1966 as a life saving procedure & one of important indicator for an emergency catheterization in infants preformed carefully. The procedure carries only small risk, but there is significant improvement in hemodynamics and oxygen saturation.

Patient was immediately shifted to cath lab and femoral venous access was taken and a 5 F femoral sheath was placed, despite lack of dedicated BAS balloon, coronary balloon was used. The inter-atrial septum was closed with BMW wire and once balloon reached in Left atria and was confirmed through both fluoroscopy and echocardiography, it was inflated and pulled into RA with jerk to tear septa. There was immediate improvement in saturation which jumped to 97 % from 77 % and Neonate was shifted to NICU.

Plan was now to do the complete correction as these patients do not live longer despite initial palliation by balloon atrial septostomy. With in next two days child again started deteriotating and acidosis worsened. Then after discussing with family, team decided to operate this baby who was otherwise going to die without surgical correction.

Surgical efforts to treat this congenital malformation started with the start of cardiac surgery around 60 years back. Initially only palliative treatment was available till 1960s when in series circulation was corrected first time by switching circulation at the level of Atrias-i.e atrial switch operation. Surgeons from Sweden and Brazil innovated senning's and mustard operation for this. But the long term results and atrial arrhytymias were limiting factor in adopting these surgeries as the ultimate treatment. But with the advent of Arterial switch operation popularly known as Jatne operation where the great arteries are transected and reconnected normally to their respective ventricles in the newborn

period itself which is technically very challenging and demanding, the cure of this condition became possible.

Baby was shifted to cardiac operation theatre at !:00 A.M in the early morning and then our Anaesthetists put the arterial and venous lines in this 2.5 kg child. Then the final operation was performed by midline sternotomy, putting the patient on heart lung machine by cannulating aorta and right atrium. Baby was cooled to 18 degree to slow the circulation and to protect the organs from ischemia. Then the great vessels were transected, coronary arteries were also harvested and the arteries were reconnected to their respective ventricle and coronary arteries were also connected to so called Neo-Aorta . Then the Circulation was restarted and patient was disconnected from heart lung machine and shifted to CTVS ICU.

After this surgical procedure, next challenge was post operative care and weaning from ventilatory support. Here the team of our neonatologist, anaesthetists NICU staff with CTVS staff provided excellent care and extubated the patient and then kept the child on nasal CPAP and gradually weaned from CPAP and ultimalty oxygen.

Child was then shifted to Private room and then discharged home. Throughtout her stay in the hospital our neonatologist provided excellent care to the baby regarding ventilatory support, weaning, drug management and feeding etc.

ANGIOPLASTY OF BYPASS AUTOGRAFT USED FOR CENTRAL VENOUS STENOSIS IN HEMODIALYSIS PATIENT

Dr G. K. Mukhiya, Interventional Nephrologist, Head of Nephrology section, department of Medicine - GMCH

Dr. G.K. Mukhiya

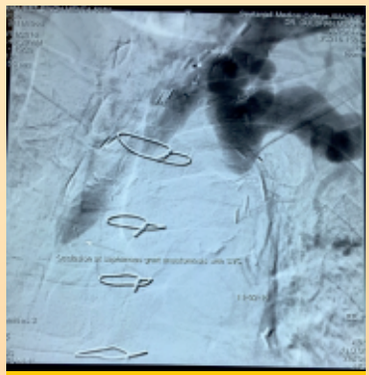
Case:

50 years old male presented to us with facial puffiness, dialysis fistula arm swelling and high venous pressure for past several weeks. Dialysis staff also noticed prolonged bleeding on removal of fistula after completion of dialysis. Patient's past medical history was significant for end stage kidney disease (ESKD) for last 3 years. For this, he was on maintenance hemodialysis twice a week. His dialysis vascular access history was noticeable for repeated dialysis catheters use in first 6 months of hemodialysis followed by creation of left brachiocephalic fistula two and half years back. Soon after creation of fistula, patient developed clinical features of central venous stenosis. Diagnostic fistulography revealed left IJV and left Subclavian junction stenosis with scarring and almost complete obliteration of left brachiocephalic vein. Autologous saphenous vein graft was anastmosed to left IJV and Subclavian junction and then it was anastmosed to SVC by our CTVS team lead by Dr Sanjay Gandhi. It resulted in improvement of patients symptoms.

This time patient was again taken up for diagnostic fistulography and central vein venography. It revealed occlusion of distal end of saphenous vein autograft i.e. at its anastomosis with SVC. Patient was counseled regarding surgical and endovascular therapy and he chose to undergo later.

Occlusive segment was first approached through femoral route as fistula was aneurysmal and had tortuous course. However, guide wire could not be negotiated through the stenosis. Subsequently lesion of interest was approached though fistula, and after almost 1 hour, lesion was traversed utilizing 0.014" floppy tip guide wire. Next challenge was to pass high pressure balloon over terumo guide wire as fistula was aneurysmal and had tortuous course. As terumo wire was not supporting balloon, Amplantz stiff guide wire was utilized to pass balloon. Stenosis was dilated with Conquest high pressure 8mm*2cm balloon. Immediate radiological and clinical results were good. Over subsequent days, patient's symptoms improved and hemodialysis is being continued.

To our knowledge, it is the first time in Rajasthan that stenosis of autologous saphenous vein bypass graft is successfully treated by angioplasty by Interventional Nephrologist. This case was particularly challenging due to several factors. Firstly, it is technically difficult to navigate guide wire through 2 years old occluded autograft placed for treatment of central venous stenosis. The course was tortuous with many collaterals. Secondly, due to tortuous course of central drainage of AV fistula, routine terumo guide wire didn't support ballon passage. To circumvent this, stiff Amplantz guide wire was used. Thirdly, stenosis in autograft was tight, thus high pressure conquest ballon was utilized for angioplasty.



Pre-angioplasty initial image

Endovascular procedures for dialysis vascular access

Arteriovenous fistula (AVF) is life line for any hemodialysis patient. Creation and maintenance of dialysis fistula is an important aspect of management of ESKD patient. Endovascular procedures namely angioplasty and declotting have become standard of care for maintaining patency of AVF due to less invasiveness and repeatability. However, cost still is prohibitive for general use. In this case, Bhamashah health insurance provided financial support.

This patient represents a useful application of endovascular procedure namely angioplasty to treat symptomatic central venous stenosis (CVS). CVS is a debilitating complication in hemodialysis patients as it becomes symptomatic after the placement of AVF.

Risk factors for CVS are previous placement of central venous catheter and pacemaker wires, more with subclavian vein use than internal jugular vein use. Clinically, CVS presents commonly as ipsilateral arm swelling with visible collaterals, difficulty in achieving hemostasis after cannulation for dialysis, clot aspiration by dialysis staff on needling and high venous pressure alarm on hemodialysis machine.

Treatment of this debilitating condition is either by endovascular or surgical. Endovascular treatment by means of angioplasty with or without stent is preferred due to its less evil nature. However, the drawback of this type of treatment is significant rate of restenosis which requires repeat procedure. On the other hand, surgical therapy is advised for those lesions which are not amenable by endovascular therapy. It is a major undertaking which requires careful preoperative assessment.

Post angioplasty image

MANAGEMENT ISSUES IN PANCREATIC DIABETES

Dr. R.K. Sharma, Consultant Endocrinologist - GMCH

Dr. R.K. Sharma

Pancreatic Diabetes is classified into other type of diabetes. It is defined as hyperglycemia as a result of destruction of pancreas due to partial or total pancreatectomy, infiltrative, vascular, neoplastic process and acute or chronic inflammation. This is different from other subset of diabetes mellitus because exocrine failure related malabsorption compounded the issues of glycemic variability characterized by phases of hypoglycemia and severe hyperglycemia in unexpected way with slight change in dose of insulin or pancreatic enzyme supplements.

Mr. B, a 62 year old resident of Udaipur presented with brittle diabetes. He has been a known case of diabetes since last 12 years. He was hospitalized with severe hyperglycemia about 2 years back when he was on oral anti-diabetic drugs. He was managed by intravenous fluids and insulin infusion initially followed by subcutaneous insulin. During the inpatient stay, the patient's insulin requirement was very low and his basal insulin requirement was almost negligible.

There is a past history of chronic alcohol use. The patient developed an episode of acute pancreatitis; he underwent surgery for pseudo pancreatic cyst, details of which are not available. CECT abdomen was done which revealed partial pancreatectomy status and atrophic pancreatitis.

Patient gave history suggestive of steatorrhea, with the frequency being higher at night. Therefore, a diagnosis of pancreatic diabetes was made. Pancreatic enzyme supplements were initiated before each major meals and regular insulin before each meal. Patient was discharged with dietary advice and blood glucose monitoring.

The patient was apparently well on this line of management for approximately a year when he was re-hospitalized with history of diarrhea, steatorrhoea, weight loss and episodes of hyperglycemia and hypoglycemia with altered consciousness for last two months. He was apprehensive of insulin as he has reported that the blood glucose reading before dinner was 535mg% and he took 6 units of regular insulin before dinner by 'pen' over abdominal wall. His post dinner glucose reading was 84mg%. The patient consumed snacks till 2am when blood glucose reading was 150 mg%.

The patient revealed that he had discontinued pancreatic enzyme supplement few months ago as he was asymptomatic. He had developed the symptoms few weeks after discontinuation.

On examination; Weight: 40kg; Height: 172 cm; BMI: 13.4 kg/m2

No anemia, jaundice, edema and dehydration. Pulse rate: 84/min. BP: 140/80 mmHg.

HbA1C: 8.1%. CBC, LFT and RFT were within normal limits.

Blood glucose was estimated using a glucometer and the observations plotted in Figure 1 which shows trend of blood glucose after 6units of regular insulin. The patient would administer insulin over his abdomen by disposable pen device at an angle of 90° without making a pinch. It has been cited that a pinch up is not usually required with ultra fine small needle (5mm/4mm) of pen device in patients with BMI more than 20 kg/m2. However, this patient had very little subcutaneous fat due to chronic fat malabsorption and his BMI is less than15 kg/m2. Hence, it would be reasonable to speculate that he was injecting insulin intramuscularly at times as shown by SMBG profile after small dose of insulin. He was advised to change the technique which was to make pinch of the abdominal skin and inject at about 60°. Switch over to analogue insulin was done to avoid delayed hypoglycemia 3-4 hours post meal and pancreatic enzyme supplement was added with each major meal. Patient reported normal bowel activity, no oily stools and no unexpected glycemic variability.

Case 2:

A 30 year old male, with known pancreatic DM for three years, preceded by episodes of recurrent post alcoholic pancreatitis, presented with uncontrolled plasma glucose and severe weight loss. He has been taking Tab. Gilmiperide 1mg before breakfast and dinner. His weight was 40kg; Height: 170 cm; BMI: 14 kg/m2. The patient's SMBG readings were as follows:

BBF: 90-129. ABF; 300

Before lunch: 187 After Lunch: 400

Before Dinner: 300 After dinner: 567 po

He was hospitalized and treated with 4 units of regular insulin before each meal. The dose of Glimiperide was reduced to half. Following this, patient started gaining weight and there was improvement in blood glucose readings and subjective well-being. So the requirement of small dose of regular insulin is typical of pancreatic DM.

Diabetes after pancreatic surgery (total or partial pancreatectomy) or as a result of chronic or recurrent pancreatitis is different from type 1 and Type 2 DM. In addition to beta cells, alfa cells are also affected which leads to deficiency of both insulin and glucagon. These two hormones are key regulator of plasma glucose levels during fasting, post prandial, exercise and rest. The interplay of these two hormones maintains the glucose homeostasis. There is not much data available for treatment modality for glycemic control in pancreatic diabetes .Most of the centres are using experience of managing type 1 and type 2 DM. and applying to treat such patients.

The lack of glucagon backup, and associated malabsorption makes the management more complicated. As in our patient, who had discontinued pancreatic enzyme supplement which leads to malabsorption, weight loss and recurrent hypoglycemia due to decrease in insulin requirement. He used to omit insulin due to fear of hypoglycemia results in persistent hyperglycemia. The paucity of subcutaneous fat make such a patient more prone for intramuscular insulin delivery .and sudden unexpected hypoglycemia, These episodes can be prevented by use of needle of smallest possible length (4 mm 32 gauge ultrafine, BD nano). In patients with BMI < 20 kg/m2, a pinch up is required even with very small needle. This case highlights the importance of proper education of patients to ensure compliance and proper insulin delivery.

Despite best efforts, the management is difficult and the CGMS and CSII pumps can be considered in motivated and competent patients who can afford these devices to avoid extreme glyecemic variability and severe hypoglycemia. In suitable candidates, islet auto transplantation (IAT) can be considered.

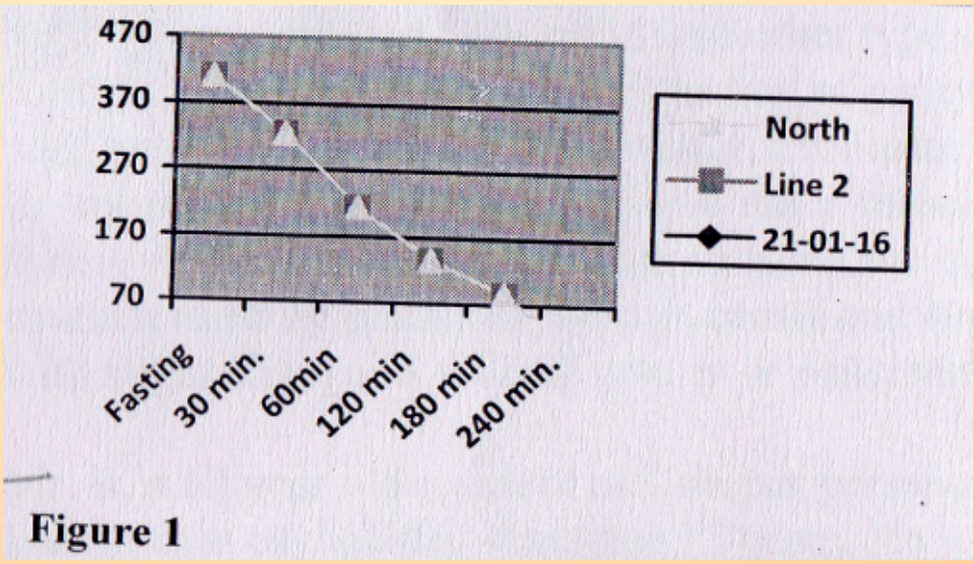


Figure 1

COMPETENCY BASED MEDICAL EDUCATION (CBME)

Dr. Manjinder Kaur, Professor, Dept. of Physiology; Academic Officer; Co-ordinator of Medical Education Unit - GMCH

Dr. Manjinder Kaur

The overall goal of undergraduate medical education programme as envisaged in the revised Regulations on Graduate Medical Education -2012 (GMR 2012) is to create an "Indian Medical Graduate" (IMG) possessing requisite knowledge, skills, attitudes , values and responsiveness, so that he or she may function appropriately and effectively as a physician of first contact of the community while being globally relevant. Hence, the Medical council of India is in process of shifting the paradigm of medical education from traditional to CBME.

CBME is an outcome-based model of education. In this system, specific, measurable competencies are identified that are guided by the needs of the community and the learners will work towards them until they are achieved.

This is a system wherein the core competencies are identified prior to the course commencement and the entire curriculum is built around these competencies. Each student will be assessed using a measurable standard which is not influenced by the performance of other student. Thus the system ensures each student graduates with a set standard that the society needs. Competency based education is an approach to preparing physicians for practice that is fundamentally oriented to graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs.

Primary focus of CBME revolves around the needs of community where learning is student centric and the student must master the desired skill or procedure with no constraints of time (i.e. it is not time based).

Traditional Medical Education Vs CBME

	Traditional Medical Education	CBME
Driving force of the teaching	Curriculum	Outcome of the student
Competencies	Poorly defined	Well defined
Clarity of learning objectives to students and teachers	Not there with many of them	Well documented
Goal of education	Completion of curriculum	Knowledge application & acquisition
Teaching	Teacher centered with no new innovate methods of teaching	Student Centered with teaching methods according to the need of the topic and the students
Learning	Exam oriented	Competency oriented
Self Directed Learning	Minimal	High
Assessment	Assessment **OF** Learning	Assessment **FOR** learning
Type of assessment	Summative	Formative with main focus on Feedback
Feedback	May or may not be given	Incorporated in the structure itself
Student involvement	Minimal	Optimum
Subject compartmentalization	Strict	Fluid
Integration	Minimum	High level of integration
Levels of Knowledge	Till the knows level only	Higher levels of learning are achieved. "Novice, advance beginners, competent, proficient and expert" i.e. building up to **"does"** level
Communication Skill and Attitude	Neglected	Incorporated
The Challenge	Deteriorating standards of the IMG to provide health care as a physician of first contact	Implementation - 1. Inertia of students, teachers, management 2. Finance 3. Training
What needs to change	The present Post Graduate selection process is based on factual recall of knowledge	1. Time management 2. Faculty motivation
What needs to be done	Slow paradigm shift from traditional to CBME	Time has changed, we must move to a modern method and technique
Solution	1. Time management can solve the problem of time-constraint. 2. Sensitize the faculty to change. Challenges are there but we can overcome them.	

The need to adopt CBME

Present medical system is knowledge based where a fresh medical graduate has theoretical knowledge of all common and uncommon diseases and is unable to implement the knowledge at workplace, and fulfill the healthcare needs of society. The medical educators realized that memorizing specific lists of facts and data is no longer the ideal way to learn. Not only might that information be outdated by the time graduation rolls around, but it also may not prepare tomorrow's doctors to practice and learn in an ever-changing clinical environment. Hence, the competency-based medical education may be the answer, where it is a curricular concept designed to provide the skills physicians need, rather than solely a large, prefabricated collection of knowledge. CBME focuses on learner's development and facilitation of learning, rather than control of learning. It includes all the domains and de-emphasizes time based training. It also conceptualizes assessment as formative and summative tool, hence converting Assessment OF Learning to Assessment FOR Learning. It helps in converting the IMG more competent in knowledge and skill so that they can be more confident at workplace and fulfill the job requirement.

Competency-based learning can help to eliminate persistent learning gaps, achievement gaps, and opportunity gaps.

Implemented of CBME in the current scenario

The various steps involved in implementing the CBME are as under :

1. Identifying the elements of competencies by the curriculum designers
2. Preparing the faculty and students for the new system of education
3. Time organization: Delineate minimum and maximum time period of training; Create space for feedback sessions and opportunity to reflect , time flexibility.
4. Planning to conduct Assessment of competencies achieved by the students by setting the milestones of learning and finally reaching for the EPA (Entrustable Professional Activities)

· Formative assessment - assessment of what has been learned and what remains to be learned.

· Summative assessment - assessment of attainment of the required level of competency, with emphasis on WPBA (Work Place Based Assessment).

· Make a blueprint with areas to be assessed, timing and assessors.

The process of developing the actual competencies for medical graduates should be made participatory and collaborative through face to face workshops,. It should involve discussing the concepts of CBME led by faculty with expertise in medical education. Various frameworks to plan and implement CBME are available and should be explored. Key among these included: Can Meds, ACGME, World Federation for Medical Education (WFME) standards, competencies developed by Scottish medical schools, and University of Minnesota Competencies for medical training, among others

Different methods and tools of assessment for CBME

1. Objectively Structured Clinical Examination (OSCE)
2. Mini Clinical Examinations (MINI-CEX)
3. Directly observed procedural skills (DOPS)
4. Mini-Peer Assessable Tool (mini-PAT)
5. Multi source feedback (MSF)
6. Portfolio: is a purposeful collection of learner work that exhibits to the learner and/others, the learners efforts, progress and achievements in given areas. Key portfolio features are: a. Formative and summative assessment b. Qualitative and quantitative components c. Personalized components like reflections, self assessment, and learner driven creative component.

DR. SANJAY GANDHI COMPLETES OBSERVERSHIP FROM THE LEIPZIG HEART CENTER

Dr. Sanjay Gandhi

Geetanjali Medical College & Hospital congratulates Dr. Sanjay Gandhi, Consultant Cardiothoracic and Vascular surgeon for being the only one to be selected from India for the prestigious observership at the Leipzig Herzzentrrum, Leipzig, Germany. As part of the Indo-German collaboration program, Dr. Gandhi had the privilege of observing 'minimally invasive cardiac surgery' from 28th February to 13th March, 2016 at the centre whose director is the renowned Dr. Frederich Mohr. Another surgeon Dr. Fausto De Pina from Brazil was the fellow observer.

Dr. Gandhi has applied this newly learnt surgical skill in a patient who is in the process of being discharged from GMCH at the time of this report going to print.

GMCH is hopeful that this surgical expertise will extend much needed benefit to patients with cardiovascular and thoracic disorders.

SALVAGE OF UPPER LIMB WITH A LONG VEIN GRAFT AND SUBSEQUENT SALVAGE OF THIS VEIN GRAFT WITH A THORACOABDOMINAL FLAP COVER IN A 10 YEAR OLD BOY

Dr. Ashutosh Soni MS, MCh, Professor & Head Dept. of Plastic and Reconstructive surgery - GMCH

Dr. Ashutosh Soni

A 10 year old young boy was admitted in the Plastic surgery ward with a small incospicuous looking wound over his right arm and cubital region following crush injury due to fall of an auto over his right upper limb.

The small wound initially appeared as if it would only require a small skin graft or a local flap cover.

On palpation of the patients radial and ulnar arteries, no pulsations could be felt and the pulse oximeter did not show any saturation.

Looking at the gravity of the circumstances ,we immediately explored the wound and extended it both proximally and distally, and to our surprise found variable destruction of muscles and tissues and the brachial artery was not showing any pulsations .

On the OT table the right brachial artery was found crushed for a considerable length of around 8 to 10 centimeters.

We immediately decided to excise the patients crushed brachial artery about a 10 cm long segment and harvested the great saphenous vein graft from his right leg region and did a interpositional vein graft between the two cut ends of the brachial artery. After ascertaining blood supply and flow distally, we repaired the soft tissue and covered the venous graft with a local transposition flap rightaway.

We were happy to get a 100% oxygen saturation on confirmation putting the pulse oximeter in his right fingers.

Later, continuing his antiplatelet and anti thrombus management we opened the childs dressing after 72 hours to find to our dismay that the local flap covering the venous graft was necrosed and there was imminent and acute danger of the venous graft to be totally exposed and leading to its necrosis and subsequent patient's limb loss. We therefore decided to cover the exposed vessels (vein graft) with a local tissue flap which unfortunately we could not find nearby and so we decided to give a pedicled thoraco abdominal flap cover to this exposed vessel.

Carefully raising a flap without exposing the underlying ribcage ,we managed to fully cover the whole of the exposed vessels and vein graft successfully.

The pedicled flap was later detatched and finally inset .

The recovery was uneventful with happiness to both the child and his parents and a releived and satisfied plastic surgeon .

Pre op picture of defect

Picture showing the final picture wit the vascular graft covered by the thoracoabdominal flap.

Laugher The Best Medicine

Patient : Doctor.. I think I am a cat !

Doctor : How long has this been going on ?

Patient : Oh, since I was a kitten I guess !

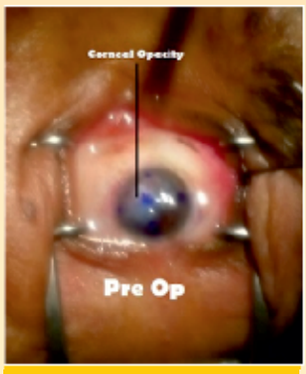
TRIPLE PROCEDURE (PENETRATING KERATOPLASTY, CATARACT EXTRACTION AND IOL IMPLANTATION) IN CASE OF LEUCOMA ADHERENS

Dr. Lipa Mohanty, Associate Professor & Dr. Ajay Purohit, Resident, Dept. of Ophthalmology, GMCH

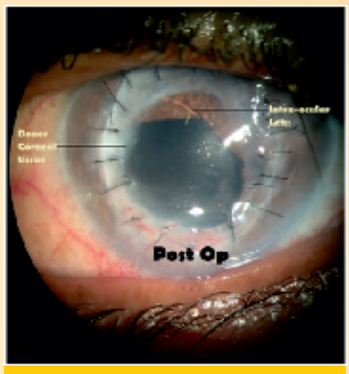
Dr. Lipa Mohanty

A 50 year old male from Banswara presented to GMCH Eye OPD on 27th November 2015 with chief complaints of marked diminution of vision in left eye following an episode of severe pain, lacrimation, photophobia and blepharospasm, 2 years back, for which he took treatment with a local physician (for almost 2 months). This lead to relief in symptoms but marked loss of vision.

General physical and systemic examination revealed no abnormalities. Ocular examination showed leucoma adherens (dense corneal opacity with adherent iris) involving almost three fourth of the cornea. The lens was cataractous. These findings were suggestive of previous episode of perforated corneal ulcer. The visual acuity of left eye was hand movements close to face. Ultrasound B scan of left eye showed a normal posterior segment. The right eye was normal, with best corrected visual acuity of 6/9. After appropriate investigations a full thickness corneal transplant (of healthy donor cornea) was planned.



Pre-Operation



Post-Operation

Informed consent was obtained and a Triple Procedure i.e. Penetrating Keratoplasty with Cataract Extraction and Intra-ocular Lens Implantation in the left eye was performed under local anaesthesia.

This was the first of its kind in Geetanjali Medical College and Hospital. Post operatively he had a reasonably good visual recovery and was discharged with topical antibiotics and anti – inflammatory medications. Follow up at three months showed a clear cornea and no signs of rejection of donor tissue.

SUCCESSFUL TREATMENT OF NEVUS OF OTA BY Q - SWITCHED Nd : YAG (1064nm)

Dr.Kalpana Gupta (Associate Professor) & Dr. Shweta Rana (Resident), Dept. of Dermatology - GMCH

Dr. Kalpana Gupta

Nevus of Ota is very common in the Asian population seen affecting females 5 times more than males. Q-Switched LASER have changed the approach to the psychological trauma and cosmetic disfigurement caused to the patients .

A 25 year old male presented to the Dermatology OPD at GMCH with nevus of Ota involving the right cheek and right sclera. He gave history of treatment with multiple topical medications with no response.

The patient was treated with 6 sessions (which is considered the average number of sessions)of Q-switched Nd: YAG LASER (1064nm) over a period of one year on the outpatient basis. Excellent improvement(>80% clearance) was noted as shown in the figures. No textural change or scarring was seen.

Q-Switched Nd:YAG(1064nm) has been documented as the safest and efficient treatment in nevus of Ota.

Before Treatment

After Treatment

CARCINOMA LUNG PRESENTING WITH CERVICAL PAIN

Dept. of Psychiatry and Dr. R.G. Laddha, Asst. Professor, Dept. of Medicine - GMCH

Dr. R.G. Laddha

Cervical radiculopathy is seen frequently diagnosed in orthopedic, neurology and general medicine clinics. The authors present a case of an elderly patient presenting with severe neck and upper limb pain who was referred to psychiatry for possible primary psychogenic basis of his symptoms. History, examination and investigation findings are presented.

A 65 year old married male presented to the orthopedic OPD with the chief complaint of pain in the neck and left upper limb since 1.5 years. He was diagnosed with cervical spondylosis and was referred to the psychiatry OPD for assessment for possible somatoform disorder as the clinical signs were apparently out of proportion to the patient's symptomatology. The patient was admitted under psychiatry for detailed evaluation.

The patient complained of severe pain in the nape of the neck since one and half years which was initially intermittent but had gradually increased in intensity over the last 8 months to become continuous in nature. He reported of dull aching pain in the left upper limb as well, predominantly in the shoulders which was associated with difficulty in lifting objects. Prior to presenting at GMCH, the patient had consulted multiple physicians who had prescribed NSAIDs and anti-anxiety medications with no symptomatic relief. The patient had also consulted a neurosurgeon elsewhere who noted absent triceps and biceps reflex on the left side and had advised nerve conduction velocity study and an electromyogram, which for unspecified reasons were not performed. The patient reported insomnia and inability to derive joy from usual pleasurable activities which he attributed to the distressing severity of the pain. A history of decrease in appetite and clinically significant weight loss was elicited. The patient's attendant reportedly noticed hoarsness in patients voice. The history was negative for the following: fever, cough, chest pain, breathlessness, hemoptysis, swelling of limbs, abdominal discomfort, headache, nausea/vomiting, alteration/loss of consciousness, cognitive abnormalities, visual complaints, urinary disturbances, joint pains, skin lesions, substance use, pervasive mood or anxiety symptoms, delusions and hallucinations. There was no history suggestive of diabetes mellitus, hypertension, ischemic heart disease, tuberculosis, thyroid dysfunction, rheumatological illness.

The patient had an unremarkable past and family history. Mental state examination was unremarkable except for an anxious and distressed affect which was normal in range, stable and appropriate. Initial general physical examination revealed the following findings: height- 165cm, weight-43 kg, tachycardia with normal rhythm (126 bpm), blood pressure of 152/94 mm Hg. Jugular venous pressure was within normal limits. Clinical examination of the neurological, cardiovascular and gastrointestinal systems revealed no abnormality. The patient had normal cervical range of motion and a negative Spurling's sign.

Haematological & biological investigation showed leukocytosis (13,500/cumm), thrombocytosis (4.54 lac/cumm), raised ESR (30 mm/hr) and hyponatremia (128 mmol/l). Blood sugar, Urea, creatinine, LFT, TSH, Calcium & Magnesium were within normal limits. HIV, HbsAg, HCV test were negative.

Considering the history and examination findings, there was no evidence of a primary psychiatric disorder. Duloxetine 20 mg twice daily was added to the medications advised by the orthopedic surgeon. The patient experienced better sleep and reduction in pain. In view of the pain symptoms, decreased appetite and significant weight loss, a referral to the general physician was made. Chest radiograph showed elevation of the left diaphragm. The physician made a provisional clinical diagram of CA left lung and advised further investigations besides starting metoprolol 25 mg for hypertension. Contrast enhanced CT of the chest reportedly showed a well defined malignant mass lesion in the left paratracheal, prevascular region just below the left sternoclavicular joint and anterior end of the first rib, completely occluding the left subclavian vein causing partial encasement of left common carotid artery and arch of aorta. USG of the whole abdomen revealed no significant abnormality. CT brain revealed mild generalized age related cerebral atrophy. An ENT consultant was made and left vocal cord palsy was also diagnosed. A medical oncology referral was made and patient was intiated on appropriate chemotherapy regimen with paclicaxel and carboplatin.

This case report highlights the importance of having a keen and high index of suspicion of neoplastic conditions especially in patients more than the age of 60 years presenting with recent onset of cervical pain with or without neurological deficit and constitutional symptoms. A shorter mean history of the disease almost normal cervical spine range of motion and a negative Spurling's sign.

FELLOWSHIPS IN MEDICAL EDUCATION

Dr. Manjinder Kaur With FAIMER Fellowship Award

Geetanjali Medical College and Hospital is proud to announce the completion of fellowship in Medical Education of the following faculty members

1. Dr. Manjinder Kaur, Professor, Dept. of Physiology has completed two year fellowship (FAIMER) from FAIMER regional center, Christian Medical College Ludhiana.

FAIMER is a non profit program run by ECFMG, Philadephia, USA for development of medical education technology among medical teachers accross the globe. Sixteen medical teachers are selected each year from all over southern Asia for the fellowship.

2. Dr. Arvind Yadav, Associate Professor, Dept of Pharmacology and Dr. Prabhakaran, Associate Professor, Dept. of Anatomy have successfully completed one year fellowship (FIME) from Smt. NHL MMC, Ahmedabad under MCI

New selections:

Dr. Harpreet Singh, Professor, Dept. of Orthopaedics and Dr. Manu Sharma, Asst. Professor, dept. of Psychiatry have been selected as FIME Fellows for the year 2016 at NHL MMC, Ahmedabad under MCI.

Completing this year:

Dr. Manjinder Kaur, Dr. Suman Parihar and Dr. Ashish Sharma will be comleting their one year FIME Fellowship program in this year

DR. MANU SHARMA AWARDED PRESTIGIOUS FELLOWSHIP

It is indeed a matter of pride for the department of Psychiatry and GMCH that Dr. Manu Sharma, Assistant Professor, was one among 16 young psychiatrists selected from a total of 60 applicants on an international basis from the South Asian Association for Regional Co-operation (SAARC) countries and Myanmar for the 4th Leadership and Professional Skills Workshop for Early Career Psychiatrists. The workshop was held at the National Institute of Mental Health & Neurosciences (NIMHANS), Bengaluru from 14th-16th January 2016.

The department of psychiatry is pleased to share that Dr. Manu Sharma was awarded the prestigious fellowship of the Dr. Ramchandra N. Moorthy Foundation for Mental Health and Neurological Sciences. As a consequence of this fellowship, Dr.

Dr. Manu Sharma Taking Prestigious Fellowship Award

Manu Sharma will make effective and meaningful contributions in clinical and academic leadership roles at GMCH.

GMCH FACULTY HONOURED

Dr. Udai Bhoumik Felicitated

Dr. Udai Bhoumik, the Neuro surgeon at GMCH has been awarded with certificate of excellence by the Honorable Home Minister of Rajasthan, Shri Gulab Chand Kataria, for his outstanding surgical work for brain & spinal surgery, over 4000 cases, on the Republic Day 26th Jan. 2016, at district level annual function.

Glory of India Award to Dr. Sareen

Dr. Devendra Sareen, Prof. & Head, Paediatrics dept. of GMCH has been awarded with Glory of India gold medal by India international centre, New Delhi in oct. 2015 as a recognition of his services rendered to the destitute, (deaf, dumb. blind and mentally retarded) children The award was presented by Ex Election Commissioner of India Dr. G.V.G. Krishna Murty and Ex Governor of T.N. & Dr. Bhishm Nath Singh.

GLIMPSES OF PROGRAMS AND ACTIVITIES

Geetanjali School & College of Nursing (GSN & GCN)

A number of activities were organized pertaining to health related issues of disease causation and prevention for community education and motivation.

Celebration of WORLD MENTAL HEALTH WEEK (5 to 10 oct. 2015) the theme of which was "dignity in metal health". A rally organized in village Nai, Skit performance in village Bhujra, brain storming activities organized in primary school Sisarma & visit to 'Asha Dham' for caring & rehabilitation activities for mentally challenged destitutes. The week was inaugurated by Dr. Jaya laxmi LS , Dean GSN & GCN. Programs were guided by Mr. Yogeshwar puri, the principal & the faculty

Induction and orientation program for GNM and BSc. 1st year students: on 21st October 2015 was attended by about 500 students and there parents. It was inaugurated by the honorable vice chancellor of G.U. - Dr. R.K. Nahar. The program was spread over 10 sessions.

Rally on the "World Aids Day" (1st Dec. 2015) was organized in village Nai to spread awareness of, and causative, preventive and treatment issues of HIV and AIDS. The theme was "Getting to zero".

The "Annual Sports Week" of the institution was Organized from 3rd to 12th December 2015 in which the students participated in large number in various indoor and outdoor games and sports. It was inaugurated with marathon-run for peace and harmony by Dr. Jaya Laxmi, Dean and Director.

The Annual day Celebration – **Gunjan The Echo 2015** was organised on 23rd December 2015, inaugurated by Dr. G.L. Dad, additional Dean GMCH. Colorful cultural program by students was a treat to watch. Certificates and mementoes were awarded for academic excellers in different Nursing courses (2014-15). The best teachers and best department were also awarded.

Pregnancy Awareness week was celebrated from 10 to 12 February 2016 by Department of Obst. & gynaecology. Activities included rally organization, 'Nukkad Natak' Performance, Poster exhibition, leaflet distribution at Community health Centre village Nai.

A state level workshop on "Application of theories in Nursing research and practice" was organized by the 1st batch of Ph.D Nursing Scholars of Geetanjali College of Nursing on 20th feb 2016. The theme of the workshop was "Nursing Theories: Closing the gaps in Research and Practice". The workshop was inaugurated by the vice Chancellor of Geetanjali University Dr. R.K. Nahar and Dr. Jaya Lakshmi L.S. Dr. Samuel George, HOD Nursing Research and Ph.D. guide GCN, Mr. Yogeshwar Puri Goswami, Mr. Gajendra Jain and Mr. Kuldeep Patidar were the resource persons. Six scientific sessions were held. The Participants included HOD's, faculty and students of schools and colleges of Nursing from different part of Rajasthan.

Diabetes Awareness Month Celebration - November 2015

November 2015 has been celebrated as Diabetes public awareness Month by Geetanjali Medical College and Hospital. During this period a series of Free Diabetes detection Camps have been organized at various places in Udaipur Division including GMCH campus Udaipur on 18th & 19th November .

About 700 patients were examined by Dr. Rajendra Kumar Sharma Consultant Endocrinologist and evaluated for glycaemic status by random glucose test in all and glycosylated haemoglobin (HbA1C). All patient s were also looked for to see any complication of diabetes including neuropathy, nephropathy and peripheral vascular disease. Exhibition of diabetes education, posters related to diet., disease, symptoms & signs of hypoglycemia and hyperglycemia and complication of diabetes were displayed. Diabetes education lectures were also held for patients and educative videos were also displayed.

CANCER-DAY CELEBRATIONS

The Geetanjali Cancer Centre celebrated the **World Cancer Day** Walkathon, over Fatehsagar-Pal was lead by the Chairman, Geetanjali university- Shri J.P. Agarwal & joined by the Vice Chancellor Dr. R.K. Nahar, Dean GMCH Dr. F.S. Mehta, Director Radiation Surgery Dr. Shankar V. & his Collogues In oncology deptt. and Senior faculty members of GMCH. Almost 400 people joined the walkathon carrying placards mentioning 'defeat cancer' messages. Enthusiastic people of all ages & from different walks of life put out slogans about 'stopping tobacco use', 'early treatment right treatment & likewise.

In the walkathon program, chairman Shri J.P. Agarwal addressed to beware of the dreaded illness and to report for diagnosis & treatment, at the earliest.

GCC organized camp for screening of susceptible persons at concessional rate from 2nd to 6th February.

A very unique, **Cancer - Survivorship program** was organized on 23rd January at Geetanjali Auditorium, coordinated by Dr. Shankar V. & conducted by the students of GMCH where persons who braced and recovered from cancer presented their experiences to encourage others. These persons including few children also presented prayers, songs and danced over the popular songs. Dy. S.P. Umesh Ojha, was the chief guest of the function, Vice chairman, Geetanjali group. Shri Kapil Agarwal, vice chancellor Dr. R.K. Nahar, C.E.O. Shri Ankit Agarwal & Dean GMCH Dr. F.S. Mehta were the guests of honor.

Meditation in Stress Management

The academic demands on the medical undergraduate are increasing. This can lead to a feeling of inability in coping, especially if demand is high and control low. The perceived inability to cope can lead to stress which can impact workplace performance as well as coping in leisure time.

With the aim of addressing the issue of stress among medical students, the department of Psychiatry in collaboration with the Medical Education Unit organized a workshop on 'Meditation in Stress Management' on 12th February, 2016. The main delegates for the workshop were approximately 250 medical undergraduate students. Dr. Mahendra P. Sharma, Professor and Head, Department of Clinical Psychology and Behavioral Medicine Unit, NIMHANS, Bengaluru was the faculty for the workshop. Dr. Sharma highlighted the importance of mindfulness in preventing and managing stress. Mindfulness involves 'paying attention in a particular way: on purpose, in the present moment, and non-judgmentally'. It refers to the cultivation of conscious awareness and attention on a moment-to moment basis. Dr. Sharma also enriched the learning experience by providing a demonstration of mindfulness based meditation.

Laugher The Best Medicine

Patient : Doctor, can you give me something for my hands - they shake all the time.
Doctors : Do you drink a lot?
Patient : Well, I wish I could, but I seem to spill most of it !

WORKSHOP ON COMMUNICATION SKILLS FOR BREAKING BAD NEWS

The Medical Education Unit, GMCH had organized one day workshop on Communication skills for breaking Bad news in which 25 interns had participated as delegates. The workshop was inaugurated by Dean GMCH, Dr. F.S. Mehta. The faculty members who participated in this workshop were Dr. H.N. Mathur, Dr. Manjinder Kaur, Dr. Suman Parihar, Dr. Mukul Dixit and Dr. Manu Sharma. In this workshop, Dr. Suman Parihar and Dr. Manjinder Kaur sensitized the interns to the need of developing good communication skills for professional polishing. They were also oriented to the difficult situations faced by the physicians during their career, where they have to break bad news to the patients and their relatives. They were introduced to the SPIKES protocol of breaking Bad news. Later during the group activity, they applied this protocol while demonstrating the role plays assigned to them on different difficult situations viz. 'breaking the news of limb amputation to the patient', 'breaking the news of HIV infection to the patient', 'breaking the news of infertility to the couple' and ' breaking the news of death of the patient to the relatives'. The participants had done the excellent brainstorming on the session. Dr. Manu and Dr. Mathur had added great inputs during the session. The feedback obtained from the participants was analyzed and could be summarized as “We don't have the formal training on communication skill and through this workshop we have learnt the need and skill of breaking bad news. We recommend that such workshops should be conducted regularly for MBBS Students.” Some of the participants even recommended to start the training on communication skills from first MBBS itself.

Even MCI has realized the need of formal education on developing soft skills in the Indian Medical Graduates (IMG), hence it is rolling out a new module (Attitude and Communication (ATCOM) module), which will be implemented shortly in all the medical colleges of the country. In this module, the formal education on ATCOM, will be given to the students from first MBBS itself through the institutional Medical Education Units.

REPUBLIC DAY CELEBRATED

The 67th Republic Day was celebrated in GMCH campus in a very thrilling manner. The national flag was hoisted by the Honorable Vice Chancellor of Geetanjali University - Dr. R.K. Nahar. In his address highlighted the achievements made by the affiliated educational units and hospital of G.U. for the benefit of masses and also pointed out our future plans. The guard of honour was presented to Vice Chairman Shri Kapil Agarwal and C.E.O. Shri Ankit Agarwal. The Deans of all the affiliated colleges and large number of staff members and students were present on the occasion. Cultural items were presented by students of Geetanjali Medical, Pharmacy, Dental, Physiotherapy and Nursing colleges. The program was co ordinated by G.M. H.R. Shri Rjeev Pandya in association with H.R. & Marketing departments.

Laugher The Best Medicine

How many surgeons does it take to change a light bulb ?

None..
They would wait for a suitable donor and do a filament transplant.

SPANDAN

Shri J. P. Agarwal
Chairman,
Geetanjali Group

"GMCH is proud to be associated with Bhamashah Swasthya Bima Yojna.
This scheme shall have a major impact on the availability of quality healthcare facilities for the masses of the state; especially southern part, which is called Tribal Sub Plan (TSP) area people.
GMCH is always ready to associate with such schemes by the Government in healthcare, so as to provide our services to the people of Rajasthan, with ultra modern healthcare facilities. We take this as a golden opportunity to serve those, who need our care but were unable to utilize our services. Now, we can provide healthcare facilities to people in best possible manner thru this scheme."

भामाशाह स्वास्थ्य बीमा योजना

माननीय श्रीमती वसुन्धरा जी राजे
मुख्यमंत्री, राजस्थान

लाभार्थियों को अन्तरंग ईलाज हेतु कैशलेस सुविधा

प्रत्येक परिवार को प्रतिवर्ष चिन्हित सामान्य बीमारियों हेतु रु. 30 हजार
और चिन्हित गंभीर बीमारियों हेतु 3 लाख तक का स्वास्थ्य बीमा कवर

भामाशाह स्वास्थ्य बीमा योजना के अंतर्गत 3 लाख तक का नि:शुल्क उपचार
लाभार्थी का चयन राष्ट्रीय खाद्य सुरक्षा अधिनियम **(NFSA)** के अंतर्गत चयनित लाभार्थी (अर्थात 2रू. प्रतिकिलो गेंहु लेने वाले)

राष्ट्रीय खाद्य सुरक्षा अधिनियम के अन्तर्गत चयनित परिवारों को भामाशाह स्वास्थ्य बीमा योजना में नि:शुल्क चिकित्सा सुविधा

राजस्थान सरकार द्वारा अधिकृत चिकित्सा केन्द्र

गीतांजली
मेडिकल कॉलेज एंड हॉस्पिटल

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