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HIGHLIGHTS

TOTAL PANCREATIC LIPOMATOSIS: AN UNUSUAL ENTITY

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Dr. Ravindra Kundu

CASE REPORT

A 60-year-old woman presented with 2 months history of chronic diarrhoea, decreased appetite, loss of weight and occasional edema . She described her stools as “frothy and mucus retained”. She complained of bloating, flatulence and on and off vague upper abdominal pain since 6 months. Six months prior to presentation, the patient was diagnosed with type 2 diabetes mellitus and was on an insulin therapy regimen. Physical examination revealed no organomegaly or palpable abdominal mass, however, pallor and mild tenderness in epigastrium was present. Routine blood cell counts, renal and liver function tests were normal. Ascitic fluid tap revealed clear transudate. Biochemical investigations showed raised serum amylase and serum pancreatic lipase levels (516 U/L and 912 U/L; normal values 0–200 U/L and 0–190 U/L, respectively), consistent with pancreatitis. Ultrasound abdomen revealed hyper reflective pancreas with increased echogenicity. Axial unenhanced CT scan at the level of pancreas showed low-attenuation hypodense fat density area completely replacing head, body & tail of pancreas. The density of the pancreatic parenchyma had uniformly decreased to the same level as that of the surrounding fatty tissue.[Fig1(a)]. Contrast enhanced computed tomography (CT) of abdomen revealed atrophic pancreas ,completely replaced by fat (attenuation value = –76 HU) with no demonstrable normal pancreatic parenchyma. The entire pancreatic parenchyma was absent and only a contrast-enhancing net-like shadow was visible. [Fig1(b)]. There was no calcification, intrapancreatic mass or dilatation of pancreatic duct, intrahepatic biliary radicals or common bile duct . On the basis of abdominal computed tomogram assessment, a provisional diagnosis of total pancreatic lipomatosis, secondary to pancreatitis, was made. To confirm the diagnosis, magnetic resonance cholangiopan-creatography (MRCP) was performed. On MRCP, the cross- sectional images revealed high signal intensity in the corresponding location of the pancreas, consistent with fatty infiltration [Fig1(c)].The Common bile duct , the main pancreatic duct and Duct of Wirsung were normal and clearly seen [Fig1(d)].

Fecal fat analysis established malabsorption. Reduced fecal concentration of elastase, decreased output of insulin and glucagon led to the diagnosis of exocrine pancreatic insufficiency, resulting from total pancreatic lipomatosis. The patient improved clinically after 8-week trial of high-dose oral pancreatic enzyme replacement therapy. There is a marked reduction of steatorrhea and weight gain.

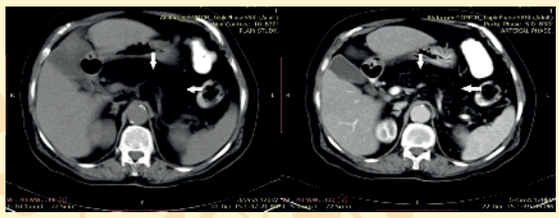


Fig 1 (a) Fig 1 (b)

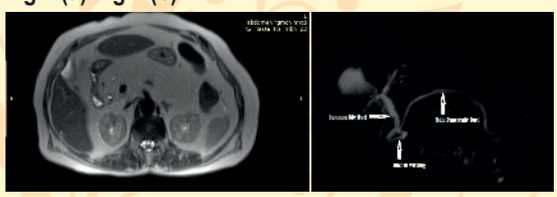


Fig 1 (c) Fig 1 (d)

Figure 1 showing Fig 1 (a): Axial unenhanced CT scan at the level of pancreas shows low-attenuation hypodense fat density area completely replacing head, body & tail of pancreas. Fig 1 (b): Arterial phase contrast enhanced axial CT section demonstrate atrophic pancreas with total fat replacement. The entire pancreas has low attenuation value (HU = –76). Fig 1 (c): Axial T2W magnetic resonance (MR) image which show high signal intensity in the corresponding location of the pancreas , consistent with fatty infiltration. Signals in pancreatic region is simliar to mesenteric fat, however, ductal structures still evident {Fig 1 (d)}.

Discussion

Total pancreatic lipomatosis is an unusual entity of pathologic significance and speculative origin. It refers to complete replacement of pancreatic parenchyma by fat cells. Fat replacement may vary from mild fatty infiltration to massive replacement of the pancreas by adipose tissue, resulting in malabsorption syndrome due to pancreatic insufficiency.

Sonographic findings are often nonspecific and inconclusive and such assessment do not usually allow definitive characterization. The overlying bowel gas obscures the pancreas. Also, the fatty change results in hyper reflective pancreas with increased echogenicity, making its differentiation difficult from normal retroperitoneal fat. In 80% of cases, Abdominal computed tomograms (CT) and Magnetic resonance (MR) imaging can provide additional diagnostic information where clinical and sonographic features are inconclusive, unusual or indetereminate. Unenhanced CT can reliably diagnose diffuse pancreatic lipomatosis as it shows more specific fat density in pancreatic bed and has negative attenuation value of pancreatic parenchyma replaced by the fat. However, on postcontrast images, the normal pancreatic parenchyma entrapped between adipose tissue may show contrast enhancement simulating a true mass. When the condition is severe, the pancreas will have the same signal intensity and density as the mesenteric fat and thus may not be identifiable. MRI has advantage over

Desk of the Dean

Dear Reader,

On the pages that follow, you will read about a few of our faculty, students and alumni who already are making a tangible difference in the region through their research and clinical services. This issue of Spandan is rich with contributions from the post-graduates and faculty of various specialties. I am glad that the post-graduates are being more proactive to enrich Spandan. I extend my best wishes to the Editorial Board and commend them for their continued efforts.

CT in confirming the presence of uneven fatty replacement of the pancreas. In this case also, Computed Tomography abdomen showed atrophic pancreas with complete pancreatic parenchymal absence and fatty replacement **{ Fig. 1(a&b)}**. MRI verified this impression **{Fig.1(c&d)}**. Recognition of this pancreatic adipose atrophy syndrome by the radiologist is important since it represents a benign pancreatic condition that responds to adequate enzyme replacement therapy.

Conditions that have clinical pictures similar to that of pancreatic lipomatosis include: pseudoagenesis (atrophy of the corpus and the tail of the pancreas secondary to chronic pancreatitis); carcinoma of the head of pancreas (proximal atrophy of the gland); pancreas divisum (absence of fusion or incomplete fusion of the ventral and dorsal pancreas, mainly of the drainage ducts [Wirsung' and Santorini]); pancreatic pseudolipodystrophy; pancreatic masses; and agenesis of the dorsal pancreas (ADP) .Differentiation between lipomatosis and pancreatic agenesis is important and is made on the basis of whether the ductal system is present (lipomatosis) or absent (agenesis). It is therefore crucial to obtain a careful medical history and to perform the appropriate imaging studies: computed axial tomography (CT), magnetic resonance pancreatogram (MRI, including MRCP) or endoscopic retrograde cholangiopancreatography (ERCP) in order to exclude the aforementioned differential diagnoses.

Optimal management guidelines are aimed at improvement of maldigestion, dietary deficiencies, chronic pancreatitis and control of pain. Oral Pancreatic enzyme replacement therapy is used for the treatment of maldigestion. Insulin therapy regimen is used to control diabetes mellitus.Treatment success is defined by digestion of fat, improved body weight and consistency of feces.

Conclusion

The clinical presentation of total pancreatic lipomatosis is usually insidious due to varying signs and symptoms and should be considered in the differential diagnosis of patients with malabsorption. CT and MRI including MRCP are easy, reliable, safe and effective imaging methods for establishing the diagnosis. Combination of low dietary modification with modern pancreatin preparation and lipase supplementation is the gold standard for treatment.

A GLIMPSE OF PEDIATRIC SURGERY AT GMCH

Dr. Atul Kumar Mishra, Consultant Pediatric Surgeon, GMCH.

Dr. Atul Kumar Mishra

Dear Reader, it is indeed a matter of pride and pleasure for me to communicate with you through *Spandan.*

Pediatric surgery has evolved significantly since its inception as an independent department at the All India Institute of Medical Sciences, New Delhi, in 1969 and remains a challenging branch to practice and deliver results. It encompasses a wide spectrum of diseases, and my areas of interest and expertise being pediatric urology, pediatric gastro-intestinal surgery, neonatal surgery; thoracic surgery and laparoscopic surgery wherever it is possible and relevant. It requires a high standard of pre-operative, intra-operative and post-operative care including intensive care units. This surgical specialty thrives on inter-disciplinary collaboration and contributions from pediatricians, neonatologists, anesthesiologists, radiologists and pathologists.

At GMCH we have performed more than 100 surgeries since August 2016. I have been fortunate to have the experience of challenging surgeries for conditions such as urogenital sinus (UGS), congenital diaphragmatic hernia (CDH), anorectal malformations (ARM), tracheo-esophageal fistula (TEF). Given below are brief accounts of my surgical experiences at GMCH.

1.) UGS with hydrometrocolpos: In this complex anomaly, vagina and urethra open through a common channel (UGS), the size of which may vary. The incidence is approximately 1 in 10,000 live births. This female presented in neonatal period with abdominal distension and a large lower abdominal mass. First stage emergency surgery was done at RNTMC, Udaipur. She presented to us at 1 year of age with vaginostomy and a large incisional hernia (Figure 1). After initial evaluation under GA, she was taken up for definitive repair. Primary vaginal pull-through was done by abdomino-perineal approach. The highlight of this case is that we were able to avoid further stages of surgery such as colostomy and vaginal augment with bowel. The surgery lasted for approximately 7 hours as all vessels and nerves to the bladder and vagina had to be preserved and a difficult incisional hernia was also closed. The child is healthy with an adequate vaginal opening and satisfactory voiding (Figure 2).

Editor's Desk

Dear Reader,

Great going with a string of pearls kind of academic and cultural events happening one after the other in our institution, our job gets more interesting and easy to collect, collate and bring out to you. Just a wish to share my “effervescent thoughts” about the use of two very commonly used words in daily life that are “deserve” and “choice”. We often relate our objectives and goals with an inane question “do I deserve it?” This to me is guilt in another guise, so useless. Instead your making of a decisive “choice” yields true dividend. You choose to be at peace, be happy, be free; and eventually it will happen sooner than later. So friends make a choice and god is waiting to grant it.

Wishing you a great reading experience.

P.S: My sincere gratitude to contributors in *Spandan* and I expectantly wait for your precious feedback.

Editor-in-Chief

2.) H-type Recto-vestibular fistula: It is a rare type of ARM (accounting for 3% of all ARMs). The infant presented at 1 month of age with stool coming out of the introitus (Figure 3) with a normal anal opening. Staged surgery was done. We adopted a sphincter preserving anterior sagittal approach with satisfactory results. The infant recovered uneventfully and colostomy has been closed. (Figure 4).

Besides the above mentioned cases, we have had the opportunity to conduct surgical correction of bladder exstrophy; procedures such as urethroplasty, pyloplasty, thoracotomy for chronic empyema and hydatid cyst. I would like to acknowledge the invaluable contributions and efforts of the department of Anesthesiology and the department of Pediatrics, GMCH, and look forward to care for the surgical needs of neonates and children in the region.

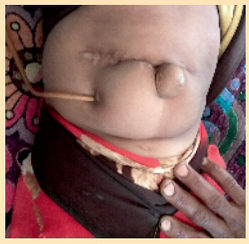


Figure 1

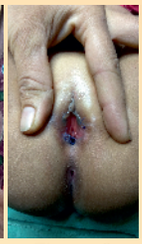


Figure 2

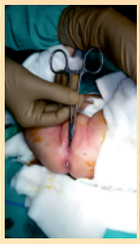


Figure 3

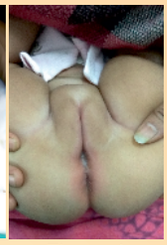
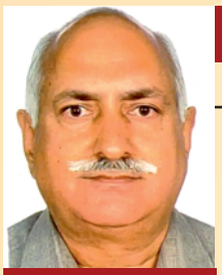


Figure 4



Dr. Sawai Singh Jaitawat

WHISTLING MEADOWS OF MEWAR

Invited Article

Dr. Sawai Singh Jaitawat, Professor, Department of Anesthesiology, GMCH

The present day Ayad area of Udaipur city (opposite Rana Pratap old Railway station) was inhabited 4000 years ago and was a very important trading centre between Gujarat and North India. It was the capital city of Mewar between 971-1168 AD. The capital was moved to Nagda, located near Eklingji Temple about 22 km from Udaipur by Guhil (the founder of Guilot dynasty of Mewar present day Sishodias) in the 7th century. This is the only dynasty in the world who has ruled Mewar from the 7th century till independence of India. The capital was later shifted to Sihad near Nathdwara and subsequently to Chittorgarh by Maharana Hammir in 1326 AD. It is said that a nomadic trader, Chhitar Banjara who would ferry goods on bullocks between Gujarat and North India constructed Lake Pichola in 1362 AD. Maharana Udai Singh, after whom Udaipur is named, established his capital on 15April 1553 AD. He also constructed the Udai Sagar dam in April 1565 AD. Maharana Kumbha constructed the Kumbhalgarh Fort around 1420-25 AD. It has the second longest perimeter wall (36 km) in the world after Great Wall of China. He also constructed Vijay Stambh in Chittorgarh Fort in 1437 AD after defeating Sultan Mahmud of Malwa. Maharana Pratap was born in May 1540 AD in Kumbhalgarh Fort. The famous battle of Haldighati was fought by Maharana Pratap against Emperor Akbar on June 18, 1576 near the present day town of Khamnor (16 km from Nathdwara town). After the death of Maharana Pratap in January 1597 AD, his eldest son, Amar Singh become the Maharana. He fought against the Mughals for almost 20 years for the freedom of Mewar but when there was a severe resource crunch he made a peace treaty with Emperor Jahangir in 1615 AD.

Jauhar (Saka) is a tradition in which the queen, noble women and their children to jump in a massive fire, the *Jauhar Kund* (pyre tank) in an act of mass self-immolation to avoid capture, enslavement and rape by invaders, when facing certain defeat during a war. Simultaneously or thereafter, the men would ritually march to the battlefield wearing orange turbans *(Keshariya pag)* expecting certain death, which in the regional tradition is called *Saka.* According to Veena Oldenburg, the roots of this practice "almost certainly" lie in the internecine warfare among different Rajput kingdoms. In contrast, according to Kaushik Roy, the *jauhar* custom was observed only during Hindu-Muslim wars, but not during internecine wars among the Rajputs. In 1303 AD, Allaudeen Khilji surrounded the Chittor Fort. Although Rana Ratan Singh had much smaller army than Khilji, he fought to the end. The first *Jauhar* was committed by Rani Padmani along with thousands of other noble women. In the year 1534 AD Bahadur Shah, the Sultan of Gujarat attacked Chittor. When there was no chance of defending the fort; Rani Karmwati (mother of Maharana Udai Singh) performed Jauhar. It is known as second *Jauhar* of Chittor. In 1568 AD, Emperor Akbar attacked the Chittor fort with a very large force and artillery. Maharana Udai Singh with his family was forced to move to Kumbhalgarh fort. The fort was handed over to Rathore Jaimal Mertia who fought to the last man and in the end Jauhar was performed by Rani of Jaimal Mertia (Rathore) along with other remaining noble women in the fort. This is known as the third *Jauhar* of Chittor. Nowhere in the history, three *Saka* were committed by successive generation of the same dynasty anywhere in the world and incidentally it took place in the same fort.

A painting depicting Rani Padmini committing *Jauhar*

Chittor's people committing self-immolation to avoid capture

Dr. Jitendra Jeenger

ASSOCIATIONS OF NUMBER AND SEVERITY OF DEPRESSIVE EPISODES WITH C-REACTIVE PROTEIN AND INTERLEUKIN-6

Dr. Jitendra Jeenger[1], Dr. Manu Sharma[2], Dr. D.M. Mathur[3], Amandeep4
[1]Professor, [2]Assistant Professor, [3]Professor & Head, [4]Post-graduate resident, Department of Psychiatry, GMCH

Many researchers have found that the inflammatory process in the body and the brain may result in to psychiatric disorders. Meta-analyses of cross-sectional studies have reported increase in inflammatory markers in depression. However, the direction of the association remains unclear.

The authors aimed to compare the levels of C-reactive protein (CRP) and Interleukin-6 (IL-6) in depressed and healthy controls; to study the associations of these biomarkers with severity and number of depressive episodes.

The research methodology involved a total of 72 subjects with major depression and 60 healthy controls were studied. CRP and IL-6 were measured in all subjects.

The results indicated no significant differences were noted between depressed patients and healthy controls with regard to CRP (p=0.29) and IL-6 (p=0.50). Those who were suffering from severe depression based on Beck's Depressive Inventory (BDI), were positively correlated with raised CRP (p=0.011) in comparison to patients with mild to moderate depression. Single and recurrent depressive disorder (RDD) were not associated with significant rise in CRP (p=0.866) and IL-6 (p=0.531).

The authors draw the following conclusions from their investigation: Severity of depression is correlated with elevated CRP but not with IL-6. No association found between number of depressive episodes and levels of CRP and IL-6. It is possible that immune dysregulation is not generally present in depression, but might be restricted to particular subgroups of depressed patients. Several factors that could influence the depression and inflammation relationship need further investigation.

Jeenger J, Sharma M, Mathur DM. Amandeep. Associations of number and severity of depressive episodes with C-reactive protein and Interleukin-6. Asian Journal of Psychiatry. 2017;27:71-75.

Dr. Seema Partani

A PROSPECTIVE, OBSERVATIONAL AUDIT OF FAILED REGIONAL ANESTHESIA IN 8170 CAESAREAN SECTIONS AT TWO TERTIARY CARE CENTERS (GEETANJALI MEDICAL COLLEGE & HOSPITAL AND RNT MEDICAL COLLEGE, UDAIPUR, RAJASTHAN)

Dr. Seema Partani[1], Dr. Sunanda Gupta[2]
[1]Associate Professor, [2]Professor, Department of Anesthesiology, GMCH, Udaipur

Background

A prospective observational cohort study was conducted in 8170 caesarean sections performed under regional anesthesia from February 2010 to January 2015 in two tertiary care centers in the city of Udaipur, India. The incidence and various contributing factors leading to total or partial failure of regional anesthesia and the conversion rate to general anesthesia were determined.

Material and Methods

All parturients posted for elective or emergency caesarean section received 12mg of 0.5% hyperbaric Bupivacaine (2.2ml) without adjuvants, administered through a 25 G Whitacre spinal needle. A structured proforma was prepared to note the demographic data, type of regional anesthesia, insertion position, position after insertion, local anaesthetic volume, loss of sensation to pinprick and grade of motor block.

Results

In the five year period 8170 caesarean sections were performed out of which 8109 (99.25%) were conducted under regional anesthesia, out of which 8068 (99.5%) under spinal anesthesia, 12 cases under combined spinal and epidural and 4 cases under epidural anaesthesia while 61 cases were conducted under general anaesthesia. The incidence of conversion rate from neuraxial anaesthesia to general anaesthesia was 2.2% (177/8068). Partial failure was observed in 1.5% (121/8068) and complete failure in 0.69% (56/8068) cases. Failure of subarachnoid block occurred due to anaesthetic factors like early start of surgery before establishment of adequate block, inadequate dose of local anaesthetic, ineffective batch of drug and technical or surgical factors.

Conclusion

Minimizing the incidence of block failure requires close attention to minute details.

The authors presented the above original research work in form of a poster at the 1st World Congress on Anesthesia on Obstetrics held in Bali, Indonesia, February 23-25, 2017.

Dr. Ramya T.K.

APPEARANCES OF THE TONGUE: NORMAL VARIATION OR PATHOLOGY?

Dr. Ramya T.K.[1], Dr. Archana M.S[2]
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Introduction

Tongue is a complex muscular organ anchored to the hyoid bone, styloid process and genial tubercles of mandible. It consists of oral and pharyngeal parts which differ in their mucosa, innervation and development. Specialized mucosa covers the tongue which is usually keratinized stratified squamous epithelium and consists of numerous papillae and taste buds. Disorders of the tongue may be developmental or acquired and result in alterations in lingual mucosa and body of the tongue; both significantly affecting its function. Normal variations in tongue may mimic pathology; hence knowledge of such appearances is critical in patient management.

Geographic Tongue (Benign Migratory Glossitis): It is a benign condition primarily affecting the dorsum and margins of the tongue, usually asymptomatic. The lesion commences at different starting points, as an erythematous area which reflects atrophy of filliform papillae and presents as an annular lesion comprising of white/yellow/gray slightly elevated peripheral zone enclosing the

erythematous area. The peripheral zone disappears for sometime (when the mucosa is recovering) and healing of depapillated and erythematous area starts. The peripheral zones may fuse and typical clinical features of geographic tongue may be evident. Lesion is circumferentially migrating and depending on the activity of the lesion, clinical appearance may vary. Geographic tongue is characterized by periods of exacerbation and remission. The disorder is usually asymptomatic although some may experience a smarting sensation or burning sensation due to superadded candidiasis. Treatment is limited to topical anesthetics and antifungals if the patient is symptomatic (Figure 1).

Fissured Tongue: It is relatively a common developmental appearance of the tongue characterized by presence of fissures and grooves on the dorsal surface, ranging from shallow cracks to deep, penetrating fissures. The condition is usually asymptomatic; however some patients may complain of mild burning. A strong association with Geographic tongue has been found. Except for tongue cleaning, no specific treatment is indicated (Figure 2).

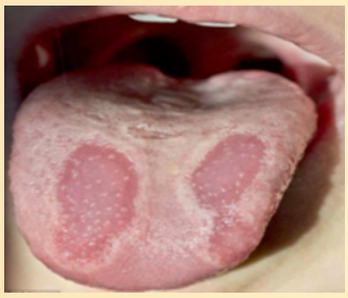


Figure 1: **Geographic Tongue**

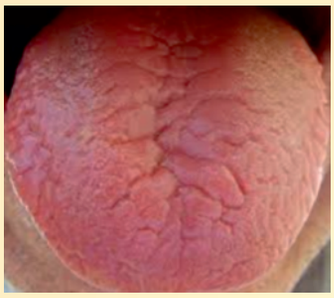


Figure 2: **Fissured Tongue**

Median Rhomboid Glossitis: It is considered as a developmental anomaly characterized by well defined depapillated patch on the dorsum of the tongue in the posterior 1/3rd. It is asymptomatic. However the size and quality of the lesion do not change significantly over time in an individual. Often it is susceptible to recurrent candidiasis due to reduced thickness of epithelium, when it appears as erythematous lesion with ill-defined borders associated with mild burning sensation. Treatment with topical and /or systemic antifungals may be required if symptoms of tongue discomfort are present. Other causes of depapillation of the tongue and neuropathic pain disorder may have to be considered in the differential diagnosis if symptoms persist (Figure 3).

Lingual Tonsil: Lingual tonsil appears as an exophytic mucosal coloured mass that may exhibit folds and crypts as seen in the palatine tonsil. They become enlarged and tender, secondary to inflammation. It is obvious under these circumstances and requires no primary treatment.

Foliate/Circumvallate Papillitis: These represent inflammation or prominence of foliate and circumvallate papilla, commonly seen on postero-lateral borders and posterior 1/3rd of the tongue dorsum respectively; often mistaken for ulcerative lesions especially malignancy. They appear red in colour, mildly elevated and tender occasionally. Frequently adjacent sharp cusps may be encountered. Treatment includes patient assurance and removal of etiology if any (Figure 4).

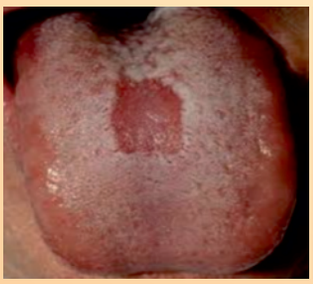


Figure 3:
Median Rhomboid Glossitis

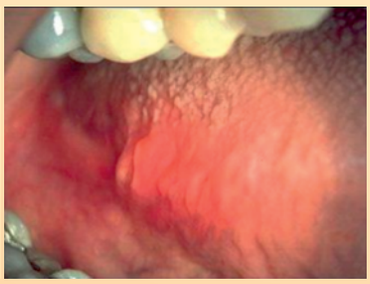


Figure 4:
Foliate/Circumvallate Papillitis

Hairy Tongue: It is a benign condition, characterized by presence of black hairy projections on the dorsum of anterior 2/3rd of tongue due to marked accumulation of keratin on the filliform papillae. Lateral and anterior borders are spared. The black or brown appearance is due to growth of pigment-producing bacteria or staining by food or tobacco. Lesion is usually asymptomatic; occasionally bad taste or gagging sensation may be reported. Elimination of predisposing factors and good oral hygiene practices including periodic scraping of the hairy projections with tooth brush or tongue scraper should be encouraged (Figure 5).

Crenated Tongue: It is a condition where there are indentations along the lateral borders of tongue, as a result of compression of the tongue against the adjacent teeth. The oral mucosa in the area of crenation is usually of normal color, but there may be erythema, if exposed to a high degree of friction or pressure. It usually results from habit where the tongue is pressed against the lingual surfaces of the dental arches, or from any cause of macroglossia. It is also caused by parafunctional habits. It is usually asymptomatic and does not require any treatment (Figure 6).

Lingual Thyroid Nodule: It represents residual thyroid tissue that remains in the area of the posterior tongue after the embryonic migration of the primitive thyroid from its site of origin in the foramen caecum to its mature location in the anterior neck. It presents as solitary / multiple nodules with extensive surface vascularity. No treatment is required unless it interferes with eating, speaking and when it contributes to hyperthyroid state.

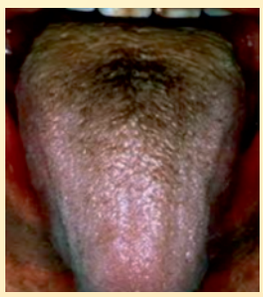


Figure 5: **Hairy Tongue**

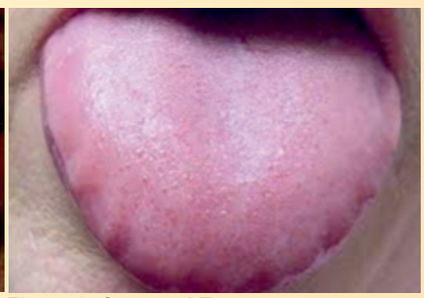


Figure 6: **Crenated Tongue**

Ankyloglossia: It is a rare developmental anomaly in which the lingual frenum is too short or attached close to the tip of the tongue. Rarely it may occur due to fusion of tongue with floor of mouth or alveolar mucosa. It may be fibrous and thick associated with problems with infant feeding and speech abnormalities. Localized gingival recession on lingual aspect mandibular incisors may occur. Surgical clipping of the frenum may be required occasionally only if patient has pronounced difficulty (Figure 7).

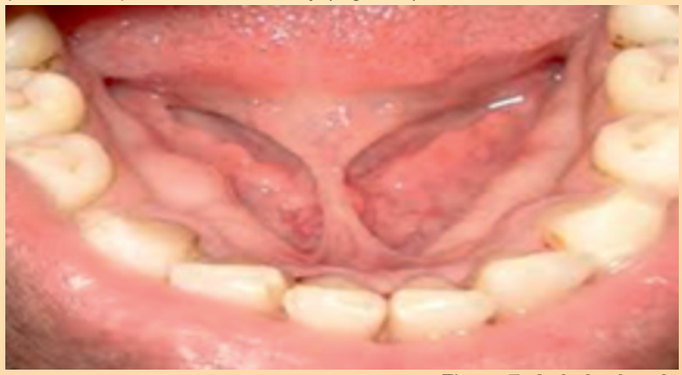


Figure 7: **Ankyloglossia**

CONCLUSION

Fundamental to diagnose oral pathologic conditions is the ability to recognize the spectrum of clinical findings that represent variation of normal within the population. Clinician needs to maintain an awareness of the occurrence of these findings. Recognition of such variations is possible if the examiner visualizes the tissue surface and its topography including contour, colour and texture. In most instances these variations are of little or no clinical significance. A clinician should have thorough knowledge of such normal appearances in structure of oral mucosa so as to determine the need for management.

ZIKA VIRUS: AN UPDATE

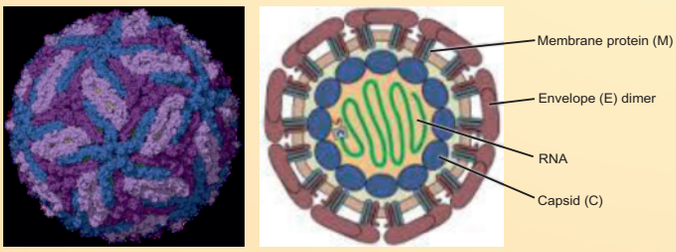
Dr. Upasana Bhumbla, Assistant Professor, Department of Microbiology, GMCH.

Dr. Upasana Bhumbla

Zika virus (ZIKV) disease is an emerging arboviral disease transmitted through the bite of an infected Aedes mosquito, which is also known to transmit infections like Dengue and Chikungunya. ZIKV was first identified in Uganda in 1947 followed by which outbreaks of Zika virus disease have been recorded in Africa, America, Asia and in Pacific region. During large outbreaks in French Polynesia and Brazil in 2013 and 2015 respectively, national health authorities reported potential neurological and auto-immune complications of Zika virus disease. Zika virus disease has the potential for further international spread given the wide geographical distribution of the mosquito vector, a lack of immunity among population in newly affected areas and the high volume of international travel. However, the mosquito that transmits ZIKV, namely Aedes aegypti, that also transmits dengue virus, is widely prevalent in India. On 15 May 2017, Ministry of Health and Family Welfare, Government of India, reported three laboratory confirmed cases of Zika virus disease in Bapunagar area, Ahmedabad district, Gujarat. Routine laboratory surveillance detected confirmed cases of Zika virus disease through RT-PCR test at B. J. Medical College, Gujarat and further confirmation by sequencing at National Institute of Virology, Pune.

Causative Agent

Zika virus disease is caused by ZIKV which belongs to the genre Flavivirus. This virus is transmitted by the bite from an infected mosquito. The reservoir of infection is not known.



Virus particle is 40nm in diameter, with an outer envelope and a dense inner core.

Transmission

ZIKV is transmitted to people through the bite of an infected mosquito from the Aedes genus, mainly Aedes aegypti, which usually bites during the morning and late afternoon hours. Transmission from an infected pregnant mother to her baby during pregnancy or around the time of birth is also now being seen as a distinct possibility. Potential sexual transmission and through monkey bite has also been reported.

Signs and Symptoms

The incubation period of Zika virus disease is not clear but symptoms typically begin within 2-7 days after the bite of an infected mosquito which presents as fever, skin rashes, conjunctivitis, muscle and joint pain, malaise, and headache. These symptoms are usually mild and can last upto a week. ZIKV infection in pregnant women has been reported to result in microcephaly, with Brazil (especially north-eastern regions) reporting a surge in such cases.

Diagnosis

ZIKV is diagnosed through polymerase chain reaction (PCR) and virus isolation from blood samples. The clinical samples which are negative for Dengue and Chikungunya should be screened for ZIKV.

Diagnostic Reverse transcriptase-PCR (RT-PCR: Nucleic acid detection by RT-PCR targeting the non-structural protein 5 genomic region is the primary means of diagnosis. Standard RT-PCR and quantitative RT-PCR provide a rapid, specific and sensitive method for early detection. Viral RNA has been detected in serum up to day 10 after the onset of symptoms. ZIKV RNA also has been detected in urine or saliva samples. The RT-PCR test available with NIV is standardized from published primers.

Detection of IgM antibodies to ZIKV by diagnostic ELISA.

Convalescent phase (> 5 days): Serology by testing IgM antibodies in blood. This is not the main stay of diagnosis as cross reactivity with other flaviviruses is very high. Plaque Reduction Neutralization Test (PRNT): this is a confirmatory diagnosis.

Virus Isolation: Viral isolation is not regarded as a diagnostic tool and is recommended only for supplemental research studies in public health surveillance.

Next-Generation Sequencing: **A** DNA sequencing technology which has revolutionised genomic research, is a specific tool for the diagnosis.

Prevention

Aedes mosquito and their breeding sites pose a significant risk factor for ZIKV infection. Prevention and control relies on removal and modification of mosquito breeding sites; and reducing contact between mosquitoes and people. For source reduction of mosquito breeding, it is important to empty, clean or cover containers that can hold water such as buckets, flower pots or tyres. During outbreaks, spraying of insecticides should be carried out as per guidelines of National Vector Borne Disease Control Program.

Treatment

ZIKV disease is usually relatively mild and requires no specific treatment. People infected with ZIKV should get plenty of rest, good intake of fluids and treat pain and fever with paracetamol. If symptoms worsen, they should seek medical care and advice. There is currently no vaccine available.

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Dr. Shweta Rana

CUTANEOUS ANGIOSARCOMA SIMULATING AS PYODERMA IN A MIDDLE AGED INDIAN FEMALE: A CASE REPORT

PG Desk

Dr. Shweta Rana[1], Dr. Kalpana Gupta[2], Dr Nidheesh Agarwal[3]
[1]Post-graduate Resident, [2]Professor, [3]Asisstant Professor, Department of Dermatology, GMCH

Case Summary

We report a rare case of a 47 year old woman who presented to the out-patient department of dermatology with history of a painful lesion on the scalp for 2 months. She had no history suggestive of exposure to radiation and an unremarkable past or family history for medical conditions. She was previously diagnosed with pyoderma elsewhere for which she took multiple courses of antibiotics with no relief. Cutaneous examination revealed a well defined violaceous, indurated and highly tender plaque on right temporo-occipital region with central yellowish crusting (Figure 1). Hair, nails, mucosae and genital examination revealed no abnormality. No abnormalily was detected on systemic examination. An incisional skin biopsy was obtained. The hematoxylin and eosin (H & E) stained section revealed tumor cells arranged in nests & sheets; irregular rudimentary & congested vascular channels and mitotic activity was noted (Figure 2). Immunohistochemical investigation revealed neoplastic cells intensely positive for CD31 and CD34 (Figure 3 & 4). A diagnosis of cutaneous angiosarcoma was made. The patient was referred to the department of oncology for further needful workup for possible metastasis.

Discussion

This case report is unique because cutaneous angiosarcoma is a rare malignancy encountered in the Indian population. Moreover, the atypical clinical presentation of this patient in terms of age and gender made timely diagnosis more difficult. Timely diagnosis of this condition is of prognostic significance. It is important for the clinicians to have a high index of suspicion for angiosarcom, especially in a patient presenting with head and neck lesions. Awareness of variable clinical presentation of this entity and biopsy greatly increases the likelihood early treatment initiation and positive outcome.

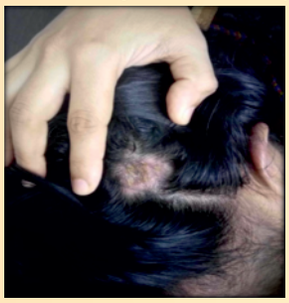


Figure 1: A well defined, violaceous lesion with central yellowish crusting

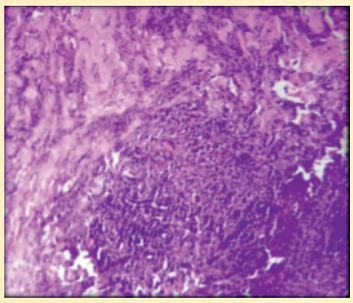


Figure 2: H & E section showing mitotic activity

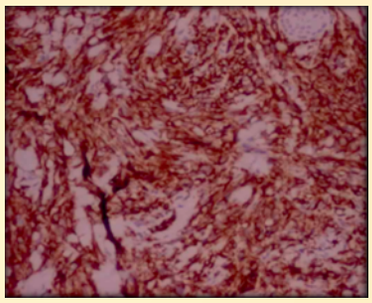


Figure 3: CD31 positive

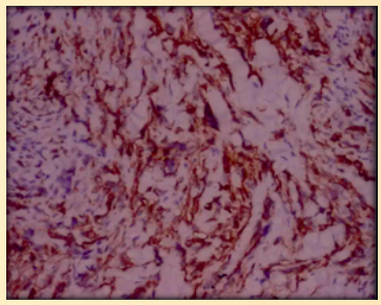


Figure 4: CD34 positive

Dr. Shefali Mehta

TOTAL PARENTERAL NUTRITION: A BRIEF COMMENTARY

PG Desk

Dr. Shefali Mehta[1], Dr. Himanshu Patel[2], Dr. Ashish Sharma[3], Dr. K.L.Mali[4]
[1]Post- graduate Resident, [2]Assistant Professor, [3]Associate Professor, [4]Professor & Head, Department of Biochemistry, GMCH

Total Parenteral Nutrition (TPN) or Hyperalimentation is the formulation of nutritional components for intravenous delivery. These include carbohydrates, amino acids, fats including essential fatty acids, electrolytes, vitamins, minerals, trace elements, water and other additives. TPN is indicated when there is an inability to provide adequate nutrition via the oral/enteral route and is administered continuously until enteral feeding can be re-established.

Indications

TPN may be the only feasible option for patients who do not have a functioning GI tract or who have disorders requiring complete bowel rest, such as the following:

- Some stages of ulcerative colitis, Crohn's disease, pancreatitis, bowel obstruction
- Certain pediatric GI disorders (eg, congenital GI anomalies, prolonged diarrhea regardless of its cause)
- Short bowel syndrome due to surgery, GI fistula, severe burns, multiple fracture, to address malnutrition pre-operatively, chemo-radiotherapy, AIDS or sepsis

Procedure

The establishment of a patent central venous access is essential for TPN administration. Collection of morning blood samples for biochemical monitoring is ensured. It is pertinent to mark the biochemistry forms as “priority TPN”. The resident medical officer reviews the biochemistry results and adjusts the TPN prescription accordingly in collaboration with the treating team and pharmacist. The RMO shall review the daily biochemistry results and adjust the TPN prescription accordingly in collaboration with the ward Pharmacist. Ensure the central venous access is present and patent for TPN administration.

Monitoring

It is essential to assess the adequacy of nutritional provisions and to detect metabolic complications. A multi-disciplinary team documents progress in the patient's notes. Fluid intake and output is monitored continuously. Weight, CBC, electrolytes and BUN is monitored daily for inpatients. Plasma glucose is monitored every 6 hours until clinical stabilization. If possible, blood samples should not be collected during glucose infusion. Liver function tests, plasma proteins (eg, serum albumin, possibly transthyretin or retinol-binding protein), prothrombin time, plasma and urine osmolality, and Ca, Mg, and phosphate are

measured twice a week. Changes in transthyretin and retinol-binding protein reflect overall clinical status rather than nutritional status alone.

Complications

Glucose abnormalities (hyperglycemia or hypoglycemia) and/or hepatic dysfunction occurs in > 90% of patients. About 5-10% of patients have complications related to central venous access. Catheter-related sepsis occurs in probably ≥ 50% of patients. Other noteworthy complications are: dyselectrolytemia, volume overload, metabolic bone disease, adverse reactions to lipid emulsions.

The experience from the intensive care unit of GMCH indicates that TPN has a positive impact in terms of reduced hospital stay, morbidity and mortality.

Source: "Nutritional Support: Total Parenteral Nutrition." *The Merck Manual*. Eds. Mark H. Beers and Robert Berkow.1995.

Dr. Yogeshwar Puri Goswami

Glimpse of a PhD thesis from Geetanjali College of Nursing

EVALUATION OF THE EFFECTIVENESS OF COGNITIVE BEHAVIOUR THERAPY ON LEVEL OF DEPRESSION & ANXIETY AMONG DETOXIFIED INMATES OF DE-ADDICTION CENTERS AT SELECTED DISTRICTS OF RAJASTHAN

Dr. Yogeshwar Puri Goswami[1], Dr. Jayalakshmi L.S.[2], Dr. D.M. Mathur[3]
[1]PhD (Nursing) Scholar, GCN; [2]Dean & Director, GCN; [3]Professor & Head Department of Psychiatry, GMCH

The primary objective of this study was to evaluate the effectiveness of Cognitive Behaviour Therapy (CBT) on severity of depression and anxiety among detoxified residents of de-addiction centres. A quasi-experimental non equivalent control group research design was adopted for the study which was conducted between September 2014 and December 2015 at select de-addiction centres of Udaipur, Chittorgarh, Bhilwara, Jaipur, Jodhpur and Kota districts of Rajasthan. A total 161 consecutive male residents were selected. Beck's Depression Inventory (BDI-II) and Beck's Anxiety Inventory (BAI) were employed to assess the severity of depressive and anxiety respectively. The following results were obtained: The effectiveness of CBT for reducing the severity of depression in experimental group pre-test – follow up mean difference was 15.55,'t' = 28.429, (p=0.001), where as in the control group pre-test – follow up mean difference was 11.06, 't' = 18.526, (p = 0.001). The effectiveness of CBT for reducing the severity of anxiety in experimental group pre-test– follow-up mean difference was 15.68, 't' = 22.08, (p= 0.001), whereas in control group pre-test – follow-up mean difference was 10.83, 't'= 21.68, (p= 0.001). The authors conclude that CBT is more effective in reducing the severity of depressive symptoms than anxiety symptoms in males with substance use disorders.

Dr. Yogeshwar Puri Goswami appeared for the P.hD. Public viva on March 18, 2017 at Geetanjali University Conference Hall in the presence of Prof (Dr.) Ramachandra, NIMHANS College of Nursing Bangalore, who functioned as the external examiner. Also in attendance were Dr. Jamila Tahilsadar, Dean, PG Studies, GMCH, Dr. Jayalakshmi LS. (Guide), Dr. D.M.Mathur (Co-Guide).

HONORS AND ACHIEVEMENTS

Dr. Sunanda Gupta, Professor & Head, Department of Anesthesiology, GMCH has the honor of delivering the *Professor Vijayalakshmi Kamat Oration* on Obstetric Hemorrhage: Hemodynamic and Hemostatic Resuscitation at CME RACE held at Sri Ramachandra Medical College, Chennai between February 10th and 12th 2017.

Dr. Gupta has been privileged to deliberate on *The Emergency Diabetic Parturient: Anaesthetic Challenges* and *Adult Learning* at the 1st World Congress on Anesthesia on Obstetrics held in Bali, Indonesia, February 23-25, 2017.

At the 10th National Conference of Anesthesiologists, Kathmandu, Nepal, held on March 23-24, 2017, Dr. Gupta delivered a lecture titled, *Obstetric Hemorrhage- Concerns in the Developing World (in pic).*

Dr. Gupta also has the noteworthy achievement of being appointed as a Reviewer for Grant Protocol on Obstetric Anesthesia at Agha Khan University, Karachi, Pakistan.

She also has been appointed as Member of Expert Committee to award FAMS in Anesthesiology by the Diplomate National Board.

We extend our sincere and hearty congratulations to Dr. Gupta.

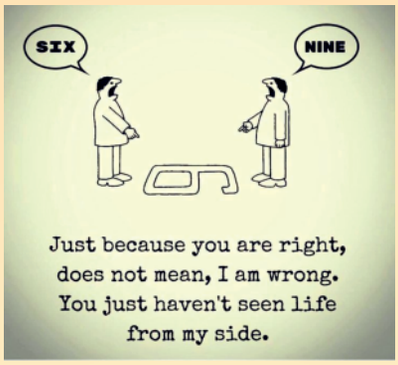
Dr. Shubham Garg Awarded at State Conference

The 16th Annual State Conference on Tuberculosis & Respiratory Diseases was jointly organized by the Chest Society, Ajmer and Dept. of Respiratory Medicine, JLN Medical College, Ajmer on April 13-15, 2017. This conference was organized under the aegis of Rajasthan Chapter of National College of Chest Physicians. Dr. Shubham Garg, post-graduate resident, department of General Medicine was awarded for the best paper presented at this conference. We extend our hearty congratulations and best wishes to Dr. Shubham Garg.

PERSPECTIVE

A father was reading his favorite magazine and his little daughter was every now and then distracting him. Trying to keep his daughter busy, he tore out one page on which was printed map of the world. He then tore the page into pieces and asked her to go to her room and put them together to make the map again.

Having done this, the father was now convinced he would read his magazine without any disturbance and also that it would take her daughter the whole day to get it done. But the little one came back within two minutes with the perfect map?? The curious and confused father asked her daughter how she could do it so quickly.



She giggled and said, “Oh...dad, there is Amitabh Bacchan's face on the other side of the paper, I made His face perfect to get the map right.”

Satisfied with the answer, she ran outside to play leaving the father surprised...

Moral of the story:

In life, there is always the other side to whatever we experience. Whenever, we come across a challenge or puzzling situation, look at the other side, we will be surprised to see an easy way to tackle the problem.

If we stop denigrating ourselves, we will be better off. If we keep the bigger picture in mind, stick to fundamentals, we will see long term gains, not the short term pain.

ARE WE SENSITIVE?

A mouse looked through the crack in the wall to see the farmer and his wife open a package.”What food might this contain?” The mouse wondered he was devastated to discover it was a mousetrap.

Retreating to the farmyard, the mouse proclaimed the warning: There is a mousetrap in the house! There is a mousetrap in the house!”

The chicken clucked and scratched, raised her head and said, “Mr. Mouse, I can tell this is a grave concern to you, but it is of no consequence to me. I cannot be bothered by it.”

The mouse turned to the pig and told him, “There is a mousetrap in the house! There is a mousetrap in the house!” The pig sympathized, but said, “I am so very sorry, Mr. Mouse, but there is nothing I can do about it but pray. Be assured you are in my prayers.” The mouse turned to the cow and said “There is a mousetrap in the house! There is a mousetrap in the house!”The cow said, “Wow, Mr. Mouse. I'm sorry for you, but it's no skin off my nose.”

So, the mouse returned to the house, head down and dejected, to face the farmer's mousetrap alone.

That very night a sound was heard throughout the house — like the sound of a mousetrap catching its prey. The farmer's wife rushed to see what was caught. In the darkness, she did not see it was a venomous snake whose tail the trap had caught. The snake bit the farmer's wife. The farmer rushed her to the hospital, and she returned home with a fever. Everyone knows you treat a fever with fresh chicken soup. So the farmer took his hatchet to the farmyard for the soup's main ingredient. But his wife's sickness continued, so friends and neighbours came to sit with her around the clock. To feed them, the farmer butchered the pig.

The farmer's wife did not get well; she died. So many people came for her funeral; the farmer had the cow slaughtered to provide enough meat for all of them. The mouse looked upon it all from his crack in the wall with great sadness.

So, the next times you hear someone is facing a problem and think it doesn't concern you, remember -- when one of us is threatened, we are all at risk.

We are all involved in this journey called life. We must keep an eye out for one another and make an extra effort to encourage one another.

Remember…

Each of us is a vital thread in another person's tapestry;

Our lives are woven together for a reason

“I've learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel' — Maya Angelou

CONFERENCES & WORKSHOPS

Workshop on Basic and Advanced Life Trauma Support

A workshop on Basic and Advanced Life Trauma Support was organized by expert team from the Deaprtment of Anesthesiology comprising of Dr. Sunanda Gupta, Professor & Head; Dr. Alka Chabra, Professor; Dr. Seema Partani, Assoc. Professor and Dr. Shantanu, Intesivist, which was attended by all the residents of the Departments of Surgery and Otorhinolaryngology.

The workshop consisted of a didactic lecture along with hands on training on a mannequin. The participants were issued a certificate after clearing a test.

Republic Day Celebration by HR Department

India celebrated its 68th Republic Day on 26th January 2017 commemorating the adoption of the Constitution in 1950 with the ceremonious grand parade in the national capital. We *Geetanjalians* too carried forward the legacy of celebrating the Republic day at GMCH with great enthusiasm and passion.

March past by four squadrons consisting of students, staff and security personnel was performed in the gracious presence of Dr. R.K. Nahar, Vice Chancellor, GU; Dr. F.S. Mehta, Dean, GMCH; Mr. Ankit Agrawal, Executive Director, GU and Dr. Kishore Pujari CEO, GU. The parade contingent was inspected by Dr. Nahar. The marching contingent honored Dr. R.K. Nahar with general salute. A cultural show performed by the students and staff of GMCH also marked the significance of the day and infused everyone gathered with a sense of patriotism. Despite inclement weather conditions on the day, the event was successfully organized thanks to the sincere efforts of Mr. Rajeev Pandya, GM-HR & Admin, GMCH. The event was anchored by Ms.Udichi Kataria, with energy and zeal.

Hospital Infection Control and Prevention Drive at GMCH

A three day event with the theme of *Infection Control and Prevention Drive* was organized with the joint efforts of Department of Microbiology, Hospital Infection Control Team and Quality Control Team of GMCH from 18-20th January, 2017. The keynote address was delivered by Dr. F. S. Mehta, Dean, GMCH. The participants were provided and introduction to Hospital Acquired Infection (HAI) which was followed by deliberations on the role of the microbiologist in prevention of HAIs. This event provided the participants with enriching information on emerging and re-emerging pathogens pertinent to HAIs. Poster presentation and a quiz competition for nurses were conducted, and winners awarded. The event concluded with a valedictory function.

International Women's Day at Geetanjali University

International Women's Day is a global day celebrating the social, economic, cultural and political achievements of women. The day also marks a call to action for accelerating gender parity. We *Geetanjalians* acknowledge the achievements of the women power and taking a step forward the International Women's Day was celebrated at GU.

The main function was held at Late Smt. Narmada Devi Auditorium. The function was chaired by Dr. Rajeshwari Narenderan, a renowned trainer of soft skills and HRD consultant also an alumni of Harvard Business School, Boston, USA and Dr. Sunanda Gupta Prof. & Head, Dept. of Anesthesiology. Mrs. Kanika Agarwal and Mrs. Shruti Agarwal, Board members of Geetanjali Group and renowned social activists working for the betterment of the deprived women of the society graced the event with their presence.

Dr. F.S. Mehta, Dean and Dr. Kishore Pujari, CEO, GMCH also attended the event. Ms. Udichi Kataria anchored the event energetically. The event was mentored by Rajeev Pandya and his innovative idea to present a specially printed Coffee mug provided the women attendees with a lasting memory of the event.

SURGEONS AND SURGERY (IN A LIGHTER VEIN)

- It is better to open and see than to wait and see. ***Sidney Cuthbert Wallace***
- The flat abdomen is a good abdomen. ***G A Decker***
- Abdominal wall closure: if it looks all right, it's too tight – if it looks too loose, it's alright. ***Matt Oliver***
- Two things surgeons fear the most are God and peritonitis. ***Henri Mondor***
- The advent of anaesthesia has made it so that any idiot can become a surgeon. ***William Stewart Halsted***
- A surgeon is someone who likes to operate, an anaesthetist is someone who doesn't like to give anaesthetics. ***David M. Dent***
- Have plenty of assistance but not many assistants. ***Augustus C. Bernays***
- A good assistant does not always become a good chief, but a bad assistant never does. A good chief has always been a good assistant. ***Charles F. M. Saint***
- Poor surgeons can improve but poor assistants never become good surgeons. ***Moshe Schein***
- All bleeding eventually ceases- when the patient is dead. ***Guy de Chauliac***
- The only weapon with which the unconscious patient can immediately retaliate upon the incompetent surgeon is haemorrhage. ***William Stewart Halsted***
- There are four degrees of intra-operative haemorrhage: 1. Why did I get involved in this operation? 2. Why did I become a surgeon 3. Why did I become a doctor? 4. Why was I born? ***Alexander Artemiev***
- The most important clotting factor is the surgeon. ***Moshe Schein***
- In men nine out of ten abdominal tumours are malignant, in women nine out of ten abdominal tumours are the pregnant uterus. ***Rutherford Morris***

- Blood brain barrier: the screen between the surgeon and the anaesthetist. *Anonymous*
- There is an inverse relationship between the surgeon's ability and the frequency he asks for more muscle relaxants. *Anonymous*
- The surgical resident is like a mushroom: kept in the dark, fed shit and expected to grow. *Anonymous*
- Better to have a piece of peritoneum on the bowel than a piece of bowel on the peritoneum. *Anonymous*
- Never let the skin stand between you and the diagnosis. *Anonymous*

SPANDAN

GMCH
HEALTH IS HAPPINESS

गीतांजली
न्यूरोसाइंस सेंटर

मिर्गी
पार्किंसंस

ब्रेन ट्यूमर

सर्वाइकल डिस्क

स्लीप डिस्क

ब्रेन हेमरेज
ब्रेन एन्यूरिज्म - कॉयलिंग, क्लीपिंग

बच्चों में न्यूरो संबंधी विकार

दक्षिणी राजस्थान
का अत्याधुनिक केन्द्र

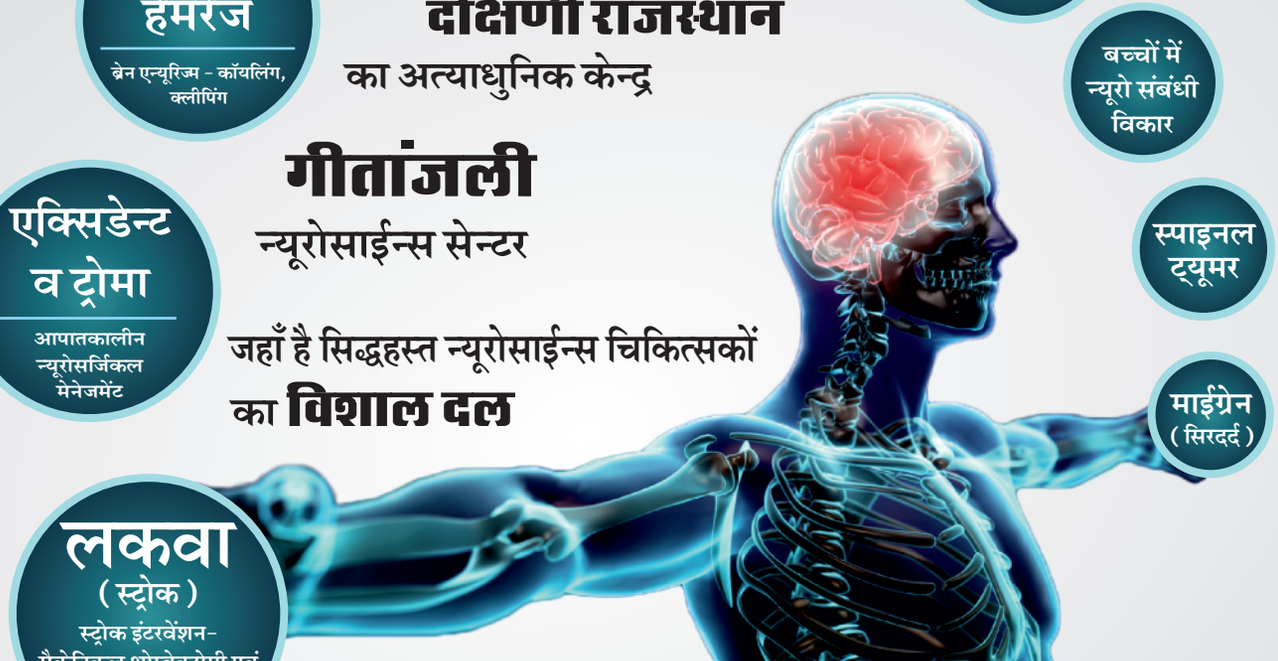
गीतांजली
न्यूरोसाईन्स सेन्टर

एक्सिडेन्ट व ट्रोमा
आपातकालीन न्यूरोसर्जिकल मेनेजमेंट

स्पाइनल ट्यूमर

जहाँ है सिद्धहस्त न्यूरोसाईन्स चिकित्सकों
का **विशाल दल**

माईग्रेन
(सिरदर्द)



लकवा
(स्ट्रोक)
स्ट्रोक इंटरवेंशन- मैकेनिकल थ्रोम्बेक्टोमी एवं न्यूरो वेस्कूलर संबंधी विकार

- न्यूरोलोजी एवं न्यूरो सर्जरी आई सी यू
- संक्रमण रहित सीमलेस ऑपरेशन थिएटर
- चिकित्सकों का मिनटों में रोगी तक पहुंच
- कम्पोनण्ट सुविधा के साथ ब्लड बैंक
- 24 घण्टे सी.टी. / एम.आर.आई / केथलेब

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