HOLY FAMILY HOSPITAL NEW DELHI

NEWSLETTER

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DEPARTMENT OF GASTROENTEROLOGY

Gastroenterology is the branch of medicine which deals with the diseases of the GI tract and the liver (digestive diseases). The level of awareness amongst the general population about the diseases of the GI tract/Liver disorders is still very low and often people do not seek medical attention and often delay treatment, at times.

The Gastroenterology and Hepatology subunit at Holy Family Hospital was established with the aim to provide comprehensive state-of- the-art care in Gastroenterology and Hepatology under one roof at an affordable cost. It consists of the OPD Chambers and the Endoscopy Suite backed by a complete radiology department. The Wards, ICU and other facilities are in common with the hospital facilities.

The Endoscopy room consists of two functional Endoscopy suites. Endoscopy deals with a large patient load. Apart from Diagnostic Adult and Pediatric Endoscopy (Esophagoduodenoscopy and Colonoscopy) a number of therapeutic procedures are being done and they include: Dilatation, Banding, Sclerotherapy, Polypectomy, Metal Stent Placement (Esophageal, Antral, Colonic and Biliary and ERCP).

Our Centre has a supportive G I surgery unit. Gastrosurgical Procedures like, Radical Esophagectomy (for Esophageal cancer), Whipples operation (For pancreatic cancer), Radical Colectomy (for colon cancer), Surgery for pancreatitis (Pancreatic necrosectomy), pseudocyt drainage, major liver resections etc are being performed. The Centre also has a varied experience in providing Laparoscopic procedures for treatment and palliation of cancer of Oesophagus, Colon Rectum, Liver, Gallbladder and the Pancreas. Other advanced Laparoscopic Procedures like Laparoscopic Surgery for Morbid Obesity, Laparoscopic Surgery for Acute Pancreatitis and its complications i.e Lap Necrosectomy, Lap Pseudocyst drainage etc, Laparoscopic Surgery for Reflux and Achalasia (Lap Fundoplication and Hellers) are being performed at the center as well.

The Gastroenterology department currently is headed by Dr. Rajeev Khosla, other team members include Dr. Rahul Gupta, Dr. Sarath Gopalan and Dr.Faiz Ahmad.

ENDOSCOPIC DRAINAGE OF A LARGE SYMPTOMATIC PANCREATIC PSEUDOCYST

Necrotising Pancreatitis can produce an acute fluid collection, that matures to become surrounded by a fibrous capsule due to a chronic inflammatory reaction. The resulting pancreatic pseudocyst may become complicated by haemorrhage, intestinal obstruction, infection, or rupture.

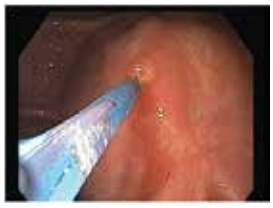
Dr. Faiz Ahmad
Consultant,
Gastroenterology

When complications develop, pseudocysts may require some form of drainage. The traditional open surgical approach has now been superseded by less invasive options such as percutaneous drainage or endoscopic drainage. The advantages of these less invasive options are balanced by the need for technical expertise and specialized equipment.

Report of a Case

A 45-year-old female presented to the OPD , twelve weeks after being diagnosed as a case of Acute Pancreatitis. She reported getting progressively worse and had non bilious vomiting associated with an enlarging, tender epigastric mass and could tolerate small volumes of fluids only.

On presentation she looked dehydrated, was afebrile, and anicteric with tachycardia of 110bpm. There was upper abdominal distention associated with a firm epigastric palpable mass. The mass was tender on deep palpation but there was no guarding or rebound tenderness. Bowel sounds were normal and a succussion splash was not present. The respiratory and cardiovascular examinations were normal.



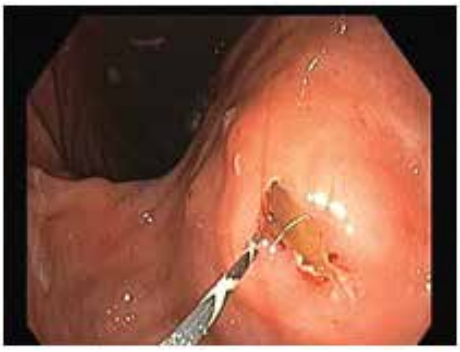
Liver function tests were normal and serum amylase was modestly raised. Abdominal CT revealed a 14 cm cystic mass occupying the entire lesser sac, interposed between stomach and pancreas. Multiphase computer tomographic scans confirmed the presence of a well-organized pancreatic pseudocyst displacing the stomach wall anteriorly and contained in a thick-walled mature capsule. Endoscopic retrograde pancreatography revealed no evidence of proximal strictures and was unable to demonstrate the connection between the ductal system and the pseudocyst.

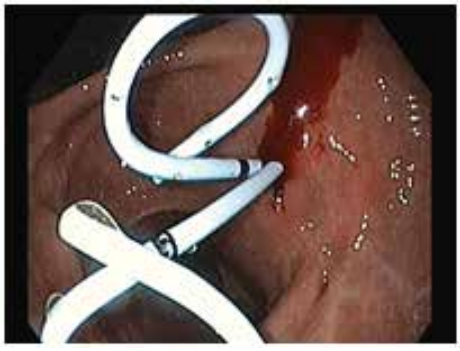
An endoscopic cystogastrostomy was attempted in the endoscopy suite under conscious sedation with intravenous Propofol administered by an anaesthetist. The procedure was performed in the left lateral decubitus position with noninvasivemonitoring

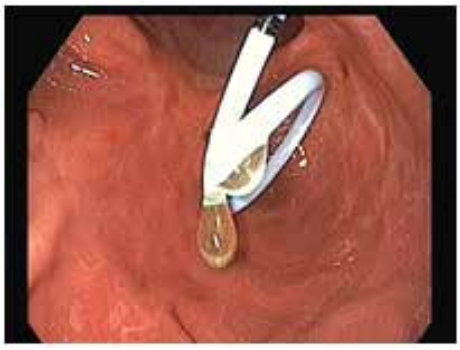
(NIVP,SPO2,ECG). Intravenous Ceftriaxone 2g was administered as prophylaxis one hour before the procedure after a test dose.

A side viewing duodenoscope was advanced into the stomach. With insufflation, the area of extrinsic gastric compression was identified on the posterior wall. The endoscope tip was placed at an appropriate area for puncture under direct visual guidance.

A triple lumen needle knife sphincterotome was advanced through the working channel of the scope and used to create a 1 cm incision in the gastric mucosa using bipolar electrocautery (figure1). Entry into the cyst was confirmed by a gush of clear yellow pancreatic fluid returning. A 480 cm flexible 0.035″ guidewire (Jagwire) was advanced through the incision. The needle knife catheter was removed leaving the guidewire across the incision within the pseudocyst cavity. (fig 2)







A biliary dilating balloon (CRE Wireguided Balloon Dilator, Boston Scientific ,USA) was railroaded over the guidewire and inflated to dilate the transmural tract to 16 mm .The dilating balloon was inflated on three separate occasions for 20 seconds to ensure adequate dilation of the incision. The dilating balloon was removed with the guidewire left in place. A double pigtail 10 F × 5 cm plastic stent was then advanced over the guidewire and deployed with the proximal end in the gastric lumen and the distal end within the pseudocyst cavity. (fig3) The process was repeated and second pigtail plastic stent was deployed alongside the first one.(fig 4)

Approximately 2000 mL of turbid yellowish pancreatic fluid was removed from the cyst by suction, resulting in immediate abdominal decompression and quick patient relief.

Ultrasound was done after the procedure to confirm drain placement within the cavity and the gastric placement was confirmed at endoscopy and subsequently with plain radiographs .

The patient was kept NPO overnight and given IV Ringers Lactate and another shot of Ceftriaxone.

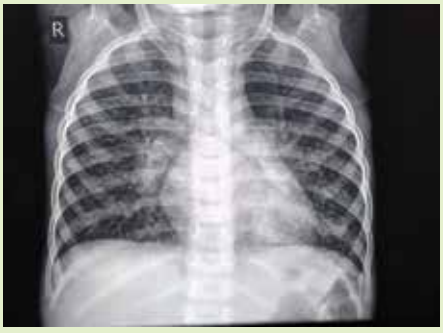
Patient was discharged on oral liquid diet plus oral antibiotics the next day and asked to follow up after 3 days.

Oral antibiotics were continued for 5 days and normal diet was commenced.

The recovery period was uneventful and the patient was now able to tolerate a normal diet. The patient remains clinically well 2 months after drainage with no pain, fever or recurrence and is able to tolerate medium sized meals without any vomiting.

QUIZ:

A 3 year old female presents with failure to thrive, oral thrush, repeated loose stools and cough. She is tachypneic and hypoxic. Generalized lymphadenopathy and hepatosplenomegaly is present. What is the diagnosis?



Kindly send your answers at: newsletter@holyfamilyhospitaldelhi.org

Answer to last quiz:

Superior Mesenteric Artery Thrombosis

TOTAL CYTOREDUCTIVE SURGERY WITH HIPEC AT HOLY FAMILY HOSPITAL

Dr. SaleemNaik
Senior Consultant
Surg. Gastroenterology

A 60 year old, lady who presented with ascites was diagnosed to be a case of Primary Peritoneal malignancy on workup. A PET Scan showed disease localised to the abdominal cavity. She was given two cycles of Neo-adjuvant Chemotherapy prior to Surgery and the disease downstage. After chemotherapy she was taken up for the Sugarbaker's Procedure or Cytoreductive Surgery with HIPEC. After the surgical part was completed, she was put on the HIPEC Machine. The HIPEC Machine has temperature probes in its catheters which go inside the peritoneal cavity and it creates hyperthermia by recirculating the fluid which is a concoction of peritoneal dialysis fluid and high dose chemotherapy drugs (Mitomycin C and Cisplatin). This allows us to give chemotherapy drugs locally, to the area where they are required the most, in much higher concentrations, than would be systemically tolerated. The patient stayed in the state of local hyperthermia for 90 minutes before being put off anaesthesia. She was then shifted to the ICU. The following day she developed low WBC counts, which went to 1500.She was managed with granulocyte maturity colony stimulating factor (GMCSF) and responded well. She had an uneventful recovery and was discharged after 10 days stay in the hospital. She is on a regular followup and is doing very well so far and is disease free.

Cytoreductive surgery is a surgical procedure used to remove tumors from patients with peritoneal mesothelioma. When it's paired with hyperthermic intraperitoneal chemotherapy (HIPEC), it considerably increases life expectancy and reduces the rate of cancer recurrence.

Cancer Surgery. Are we winning the battle?

Cancer has always intrigued mankind and till date we don't know what causes this dreaded disease in most of the cases. Though we have progressed over the years in various diagnostic and therapeutic modalities, has it really brought about a benefit in survival of cancer patients or their quality of life?

The last 20 years have seen thousands of papers published form molecular genetics, targeted chemotherapies, to various other new developments in the field of oncology. Even after all these years of research and development, cancer still remains an enigma.

In the field of Gastrointestinal and Abdominal Surgery, the two landmark additions, in the last decade, which remarkably changed cancer care and outcome are:

1. Minimal Access Oncology

A major cause of morbidity in Gastrointestinal cancers is the trauma of access. Organs like Oesophagus and Rectum, traverse through more than one body region or have difficult access.

The oesophagus traverses the neck, thorax and then the abdomen. A radical cancer surgery, would mean access of all three. A patient would traditionally get an incision in the neck, the chest and then, the abdomen and is called TTE (Trans Thoracic Approach). A radical surgery would mean that surgery includes the adjoining lymph nodes of the mediastinum, peri bronchial and carinal nodes, para oesophageal nodes, the neck nodes and sub diaphragmatic and carinal nodes, as well as nodal and perioesophageal and perigastric tissue. A meticulous dissection of Oesophagus with nodes and the perioesophageal tissue would mean a prolonged hospital course as the patient undergoes a thoracotomy, a laparotomy and neck incision as well. Patients with oesophageal cancer are more often smokers and usually have a bad chest. Historically Oesophagus is one organ in which Randomised Controlled trials favoured less radical proceduresi.e THE, (The Trans diaphragmatic Hiatus Esophagectomy), the hospital morbidity and survival was significantly better in less radical procedure, where the patient did not undergo a thoracotomy. It was however seen that though less people made it out of the hospital in the more radical group, the ones who survived had a longer disease free survival and lived longer.

The advent of Minimal Access Surgery has made an impact in the management of Oesophageal Cancer. A TTE can be done without a thoracotomy and even a laparotomy. A video assisted thoracoscopic surgery gives the advantage of being able

to do a radical procedure without giving the patient a painful chest and its associated morbidity. Hence the patient gets the benefit of long term disease free survival without the immediate morbidity and mortality of the chest incisions. Current evidence favours the Minimal Access Surgery for management of Oesophageal cancers.

Colorectal Cancers have also been extensively evaluated for Laparoscopic versus open surgery and Colonic Resections have been found to be at par, for oncological benefit, with the Laparoscopy group. The Laparoscopy group scores in a shorter hospital stay and less pain, with the caveat that it has limitations in cases of patients presenting with intestinal obstruction. In Rectal cancers, the laparoscopy group, has a better oncological outcome, as well.

Minimal access surgery has a role in not just radical surgeries but also in palliative procedures. Patients who have advanced malignancies and hence short life expectanciescan be effectively palliated by Laparoscopic procedures and have much less pain and shorter hospital stays. This has indeed been a boon for their quality of life.

2. Metastatectomies and Cytoreductive Surgery and HIPEC.

Oncology Text books have been re-written in the last few decades for Gastrointestinal Cancers. A few decades earlier a patient of Colorectal cancer who presented with Liver or Peritoneal Metastasis, considered Stage IV and was offered terminal care. The same cancers are being treated by profound aggression with Supra Major Surgical procedures along with chemotherapy. The survival results are so promising that patients are being offered not just an increase in survival but also a chance of cure after stage IV disease.

Liver Resections for Colonic Cancers with Metastatic Disease were initially undertaken in some centres and showed promising results. Liver Metastasis is no longer considered non curative in Colonic and a few other less aggressive GI cancers.

With more and more data coming up, in management of patients with colorectal and neuroendocrine tumours, focus is more of treating the Liver Metastasis first than even the primary disease (The Liver First Approach). Major Liver Resections are undertaken in these tumours with curative intent with a good outcome. In neuroendocrine tumours, even liver transplant has been undertaken for Liver Metastasis, with encouraging results of offering cure.

Cytoreductive Surgery for Peritoneal Metastasis with Hyper Thermic Local Intraperitoneal Chemotherapy is another advance that has remarkably changed the outlook towards metastatic tumours. Cytoreductive surgery was spearheaded by Sugarbaker and is also known as the Sugarbakers Technique and was primarily described for Primary Peritoneal cancers and Pseudomyxoma. This involves an extensive surgery in which the adnexa,

Uterus, the entire parietal peritoneum over the abdominal wall and the under surface of the diaphragm and any visible peritoneal deposits are removed unblock with negative margins. Segments of the Colon, Lobes of Liver and Spleen may also be removed. The cytoreductive procedure itself is complex and can last anywhere from 10 to 12 hours.

According to Dr. Paul Sugarbaker, the developer of cytoreduction with HIPEC, there are up to 5 surgical procedures surgeons may have to combine to achieve the complete removal of peritoneal mesothelioma. Which and how many of these procedures are used is determined by how far the mesothelioma has spread throughout the abdominal cavity.

The five procedures include:

1. Anterior parietal peritonectomy: This surgery removes the diseased fat pad in the front of the stomach. It can also be used to remove scar tissue from old abdominal surgeries.
2. Left upper quadrant peritonectomy: Removes the greater omentum (the largest fold of the inner peritoneum) and spleen.
3. Right upper quadrant peritonectomy: Removes tumor growth on the liver.
4. Pelvic peritonectomy: Removes parts of the uterus, ovaries or large intestine.
5. Omental bursectomy: Removes parts of the gall bladder and part of the peritoneum between the stomach and liver.

Hyperthermic Intraoperative Chemotherapy -After the entire surgery is undertaken, the abdomen is closed and the patient is put on a machine. The machine circulates chemotherapy in very high doses (more than 10 times the dose that a

patient can otherwise tolerate by IV), and under high temperatures i.e. heated sterile solution mixed with chemotherapy drugs into the abdominal cavity **(HIPEC).** The solution is heated to 104 – 107 degrees and allowed to circulate for a maximum of two hours.

Hyperthermia makes the chemotherapy more cytotoxic and also increases the permeability. Chemotherapy in such high doses, enhances the chances of a better oncological outcome of the patient and also reduces the side effects of systemic chemotherapy. It has shown benefit in Colon Cancer, Neuroendocrine Tumours, and Ovarian cancers, with peritoneal malignancy.

The write up may look very promising to someone who is naive about cancers. All the advances leading to an improved survival, are in cancers that are less virulent i. e, Neuroendocrine and Colorectal. Cancers of the Stomach, Gallbladder and pancreas, still rein havoc and have dismal prognosis. We have indeed learnt to palliate them better, but they still stand far from being conquered . Though we have made significant advances in the treatment of GI malignancies both in improving the outcome and also in making the treatment more patient friendly, we are far from winning the battle against this dreaded disease. The fight however, goes on.

A recent study on cytoreductive surgery with HIPEC reported amazing results with a median overall survival rate of 5 years, few of the patients who took part in the study survived 7 years and beyond.

CONCLUSION: Benefits of Cytoreduction with HIPEC

Improved Prognosis: In some cases, cytoreduction with HIPEC has resulted in patients living longer than 7 years after their diagnosis.

Better Quality of Life: Those who have this procedure report less symptoms and pain, allowing them to live more fulfilling lives.

MEDICOLEGAL TIT BITS

1. Which are the two issues in India on which more than 55% of the cases of medical negligence in India are fought?
   - **Improper Consent and improper medical records.**
2. If a resident doctors on night duty gives some medicine without consulting the consultant under whom patient is admitted and the drug causes serious side effects to the patient...then who is responsible. . . ?
   - **The consultant would be responsible. This is called as Vicarious responsibility.**
3. Who all are responsible for any negligent act during the treatment of a admitted patient?
   - **Clinical establishments, Hospitals and nursing homes are also responsible for all negligent work done by their staff and doctors.**
4. Who is responsible if medical records are manipulated or fabricated?
   - **Manipulation or Fabrication of the medical records is a criminal act and leads to criminal charges. The administrator/owner/ medical records department are equally responsible beside the treating doctors and can be charged accordingly.**
5. Who is competent to treat the patient?
   - **Accepting and continuing treating a patient outside the qualification and expertise is medical negligence. Membership in professional bodies is not a substitute for Lack of qualification and also experience cannot substitute qualification.**

DEPARTMENT OF LABORATORY SERVICES AND BLOOD BANK HFH

The laboratory services at HFH were started in 1961 by Dr. Blanche Fernandes, a Medical Mission sister who was trained in USA. It was set up in two small rooms in the main building, with one technician, a photometer, a microtome and a microscope.

The lab has come a long way since its beginning and is at par with the best known laboratories in Delhi.

The laboratory is run by three pathologists, one microbiologist, a biochemist and a senior resident doctor along with a robust staff of qualified and trained technicians (53 in number). Laboratory and blood bank provide 24 hour services to enhance patient care. The lab is accredited by the NABL and it offers extensive clinical testing in haematology, biochemistry, microbiology and serology. All these sections have advanced autoanalysers. We are also well equipped to do histopathology, cytopathology and FNAC - both routine and guided and have recently started immunohistochemistry. There is a constant effort to upgrade equipment and introduce newer techniques. Facility of frozen section is also available.

All lab tests are conducted in accordance with the NABL guidelines. Quality Control Programmes both internal and external (EQAS) verify the accuracy and reliability of the test results especially when testing is performed by different methodologies/ instruments.

Ours is the first blood bank in a private hospital in Delhi to get a license from the Drug Controller. We prepare 100% components from donated blood which include Packed cells, FFP and Platelets. We also have facilities for platelet apheresis whereby single donor platelets are provided to patients with severe depletion of platelets.

In addition we have a school of DMLT which was also started by Dr. Blanche Fernandes in 1962. We conduct a two year DMLT course in which ten students pass out each year.

The course is affiliated to the IMA and our trained technicians are much in demand in India and globally.

Faculty:

Dr. Asha Chug, Sr. Consultant

Dr. Sudha Suchdeva, Sr. Consultant

Dr. Anuradha Singh, Sr. Consultant

Dr. Gargi Tikku, Junior Consultant

RECENT DEVELOPMENTS IN LABORATORY DIAGNOSIS OF TUBERCULOSIS

Dr. Anuradha Singh MD, Sr. Consultant

Tuberculosis remains a public health problem despite being a curable disease. Coinfection with HIV and Rifampicin resistant as well as Multidrug resistant cases compound the problem. New tools for diagnosis are available but access to them is limited in communities with poor resources. Diagnosis in children is a problem due to their inability to produce sputum and if available, a low bacterial load.

Handling of samples from Mycobacterial testing should involve the use of class I or II BSC.

The following methods of Diagnosis of Tuberculosis are currently in use.

1. Direct Methods

   M/E – Culture

   Speciation by Biochemical Assays.

   Mycobacterium antigen detection by Monoclonal antisera

   Lipid composition analysis by Chromatography

   Detection of Mycobaterial specific DNA or RNA.

2. Immunological Methods

Detection of CMI by Skin tests.

In Vitro CMI detection by tests like Quantiferon Gold.

Microscopy – Using Fluorescent staining and / or ZiehlNeelsen staining method (including modified kinyoun's method.

Sensitivity (46 – 78%) - Easiest and quickest

- Limited sensitivity (at least 105 bact/me of specimen)
- Specificity at most 100 %
- Species identification not possible.
- Sensitivity is increased by centrifugation and fluorescent staining.

Concentration methods are used to increase the sensitivity and to decontaminate the samples for culture – Commonly used methods are:

a) Petroff's method

b) NALC method

The concentrate may be used for microscopy as well as inoculated onto suitable culture media. Among the solid culture media Lowenstein Jensen medium set in slants is used – Colonies take time to appear and incubation upto 8 weeks may be required.

Various modifications of Middle brook broth are used as liquid media. They are required for drug sensitivity testing and are also used in the various automated TB culture systems eg. BacT/ALERT and Mycobaterial growth index tube – MGIT. The growth is faster and can be detected by the systems as early as 3 days if the bacterial load is high.

Tests are also available to differentiate between MTB and MOTT (NTM) bacilli. Drug sensitivity testing may be performed both in manual cultures and automated systems.

Simple nuclei acid detection systems like Gene Xpert/ RIF are also available to add value to the microscopy but must be followed up by culture based methods including drug sensitivity testing.

2015 onwards the WHO End TB strategy has included universal drug sensitivity testing as a key component of patient centred TB care and prevention by encouraging availability of molecular tests at microscopy centres. (eg. Xpert MTB / RIF). The foundation for innovative New Diagnostics (FIND) has been reviewing current technologies to idenfy areas where end to end next generation sequencing system could be utilized in low income countries.

Current fields of interest include the following, for which policy documents have been issued:

I. WHO POLICY ON LF – LAM/ASSAY – An immunologic lateral flow strip based test fordetection of Lipoarabinomannan antigen in urine.It may only be used to assist in diagnosis of TB in HIV+vepatients with signs and symptoms of TB, with CD4 counts <=100cfu/ul, or very sick patients irrespective of the counts. It is also applicable to children. It is not to be used as a screening test for TB.

II. WHO policy on LAMP assay – a low complexity NAAT technology that can be used in a wide range of situations as a replacement for sputum smear microscopy for diagnosis of pulmonary TB, in adults with signs and symptoms consistent with TB. It may also be used as a follow up test to smear microscopy in adults with signs and symptoms of pulmonary TB.

III. Updated policy on use of Line Probe Assays for detection of resistance to INH and Rifampicin.

IV. Line probe Assays for detection of resistance to second-line anti – TB drugs.

V Recommendations for replacement of Xpert MTB/RIF by Ultra MTB/RIF. The sensitivity is increased from 114 cfu/ul to 16 cfu/ul.

Further emphasis is on the development of:-

1. Tools for screening and triage.
2. Sample transport
3. Automated microscopy.
4. Culture based tools for diagnosis of TB and DST.
5. Biomarkers to detect MTB exposure and disease.
6. NAATS and sequencing methods for TB diagnosis.

SCREENING AND TRIAGE TOOLS INCLUDE

a) Digital chest X-Rays.

b) Volatile organic compounds that can be detected by breath tests using specially devised machines with sensors.

c) Immune response based screening tests for MTB exposure.

These include

1. Tubeculosis skin test eg. Mantoux. It is easy to perform but has its limitations.
2. Interferron gamma release assays (IGRA'S) are less fallacious but are complex and require trained staff eg. Quantiferron TB gold In-tube assay(QIAGEN). The more recently developed QFT gold plus version in more sensitive.
3. C-TB (SSI Denmark) combines the previous two, using antigens other than ppd for TST. The cut off is fixed. These tests do not gauge the progression from latent to active TB and the assessment of recovery from disease can not be made.

DIAGNOSTIC SAMPLE TRANSPORT

Transport from point of collection to the testing laboratory requires maintaining their viability and integrity, usually via courier under cold chain.

Products have been developed (eg. OMNI gene sputum) to liquefy and decontaminate samples even without a cold chain (8 days in temperature upto 400 C) The samples when tested showed superior results in microscopy, culture and nucleic acid testing.

AUTOMATED MICROSCOPY

TBDx is an automated digital microscopy platform consisting of a high quality microscope and imaging system in conjunctions with a slide holding carousel. It is able to read upto 200 smears using fluorescent microscopy in a single run. In addition automated staining platforms are also available to scale up the staining of the slides.

Their cost effectiveness need to be worked on. Capture.X T is a method to concentrate low numbers of bacilli into capture chambers and then visualise them microscopically. Further confirmation may be then done by a molecular assay with DST by Q-POC.

CULTURE BASED TOOLS

Various automated systems are used by tertiary care laboratories with Bio-safety facility. eg. BacT /ALERT 3D and MGIT.

Microscopically observed drug susceptibility assay have also been developed (MODS).

BIOMARKERS TO DETECT MTB EXPOSURE / TB DISEASE

Saliva, urine, serum and whole blood biomarkers have been studied. Some could have potential in distinguishing between latent TB infection and active disease.

TB pathogen specific biomarkers have also been studied.

IMMUNE RESPONSE-BASED TESTS

These include

1. ELISA tests that detect TB antigen from various extrapulmonary specimens.
2. Immunoassays to detect soluble cellular differentiators produced by macrophages in different conditions including TB (CD finger prints)
3. Serologic and antigenic biomarkers with more specificity.
4. TB antigens from breath specimens.
5. The Determine LAMA Antigen rapid assay for use in critically ill patients with HIV co-infection.

NAATS AND SEQUENCING METHODS FOR TB DIAGNOSIS AND DST

Various methods of differing complexity are in use of being studied for the future. Most of these have use in research facilities and reference laboratories.

Ref: Tuberculosis Diagnostic Technology landscape (UNITAID) 5th Edition May 2017

MANDATORY NOTIFICATION OF TUBERCULOSIS

In the interest of public health to control and prevent the tuberculosis disease, the Central Government, specify the following measures, namely:- (1) The Healthcare Providers, termed as Clinical Establishment henceforth; shall notify every tuberculosis patient to local Public Health Authority, namely, District Health Officer or Chief Medical Officer of a District and Municipal Health Officer of urban local bodies in whatever way they are known; or their designated District Tuberculosis Officers in a specified format

(2) i) by the Medical Laboratories;

ii) by the Medical Practitioners.

iii) All Pharmacy, Chemist and Druggist dispensing anti-tubercular medicines, shall notify respective tuberculosis patients along with details of medicines and maintain a copy of prescription, the treating Medical Practitioner as per Schedule H1 of the Drugs and Cosmetics Rules, 1945; and shall furnish the same either electronically or in hard copy, to the Nodal Officer of the District or any Officer authorised by Nodal Officer.

(3) The Clinical Establishment, Pharmacy, Chemist and Druggist, failing to notify a tuberculosis patient to the nodal officer and local public health staff of general health system of rural or urban local bodies, not taking appropriate public health action on receiving tuberculosis patient notification, may attract the provisions of sections 269 and 270 of the Indian Penal Code (45 of 1860), as the case may be, which are reproduced below:

"269. Negligent act likely to spread infection of disease dangerous to life. - Whoever unlawfully or negligently does any act which is, and which he knows or has reason to believe to be, likely to spread the infection of any disease dangerous to life, shall be punished with imprisonment of either description for a term which may extend to six months, or with fine, or with both.

270. Malignant act likely to spread infection of disease dangerous to life. - Whoever malignantly does any act which is, and which he knows or has reason to believe to be, likely to spread the infection of any disease dangerous to life, shall be punished with imprisonment of either description for a term which may extend to two years, or with fine, or with both."

HOMOEOPATHY IN THE MODERN DAY HEALTH CARE SYSTEM

Dr. (Mrs.) Pankaj Mukerji
BHMS, HMD, MD (HOM)

India, with a population of 1.21 billion, has about 3% population taking Homoeopathic treatment.

Homoeopathy, is a gentle, curative system, specially catering to the class of patients who are sensitive or allergic to other systems of medicine. Recognised by WHO as the second largest system-in-use in the world, Homoeopathy was started in the late 1700's. The term **'Homoeopathy'** was coined by **Dr. Samuel Hahnemann** and was derived from two Greek words, **'Homois'**-meaning **'Similar'** and **'Pathos'**-meaning **'Suffering'**. The main principle of **'Similia Similibus Curentur'** or **'Let Likes be Cured by Likes'**, means that the homoeopathic medicines are selected on the basis of **'Total Symptom Picture'** that the patient presents with and matched with a medicine which is capable of producing **'Similar Symptoms'** when proved on a healthy human being (so next time a Homoeopathic Physician asks too many questions don't be surprised).

Started as an **Alternative System** of the Western World, Homoeopathy entered India in the late 1800's and due to the patronage of Maharaja Ranjeet Singh, took deep roots in the Indian Mind and Psyche, to be now classified as one of the Indian Systems of Medicines (AYUSH).

With the introduction of a proper curriculum and training, Homoeopathic Doctors have been able to carve out a position for themselves and convert their much maligned and ridiculed system into a **Complementary System.**

Now with great encouragement from senior practitioners and the Government of India, the MD and Ph. D. courses have been introduced, due to which Homoeopathy is moving into specialized treatment protocols.

Hospitals like Holy Family Hospital have helped to give Homoeopathy, a very prominent position by offering it as an OPD Service for the general public, thereby giving a chance to the people to choose their line of treatment and also introducing Homoeopathy at Primary Health Care Level. The success of this model is now being replicated in almost all Hospitals, Govt. or Private, gradually.

Homoeopathy is basically taught and learnt under very clear understanding of it's philosophy and working principles. It is based on the **'The Therapeutic Law of Nature'** and the Basic Principles of Homoeopathy including **Law of Similia (Let Likes be Cured by Likes), Law of Simplex (Single, Simple Remedy to be Used)** and **Law of Minimum (Minimum Quantity of Drug Substance to be Used).** Because of the **Theory of Drug Dynamization,** the popularity of Homoeopathic medicines became high, as there was near complete elimination of side effects of drugs. But this also gave rise to the popular belief of "Placebo Effect", because presence of drugs could not be proved by conventional ways. But,with the research being done in Nanotechnology and Quantum Physics, this myth is also being eliminated.

In the modern world, with the enormous population to cater to (especially in India) it will be pragmatic to remove the politics of medicine and all medical systems should work together in concordance for the benefits of mankind.

KIDNEY TRANSPLANT AT HOLY FAMILY HOSPITAL, NEW DELHI

The number of patients with End-stage renal disease (ESRD) has increased dramatically over the past decade. The treatment available for ESRD are haemodialysis, peritoneal dialysis and kidney transplant. The kidney transplant is more desirable because it has been associated with greater longevity, better quality of life and economic benefits resulting from successful transplantation for the patients, so kidney transplant is the treatment of choice for patients with ESRD.

Dr. Bheem Raj Gupta, Consultant, Nephrology

We have started kidney transplant programme at Holy Family Hospital this year. Till now two live related transplants have been done and both are successful.

First case was 32 years old male, who was brought to emergency department, at the end of last year. He was diagnosed as a case of ESRD, initiated on haemodialysis. His wife agreed to donate kidney. After evaluation kidney transplant was done. Second was 28 years old male, who also recently detected to have ESRD. Kidney transplant was offered to him as best treatment option. This time mother volunteered and after evaluation kidney transplant done. Both patients were only earning member for their family, now both are dialysis free.

We express our gratitude to Dr. Harsha Jauhari (Chairman, Kidney Transplant Surgery, Sir Ganga Ram Hospital) and Dr. Vipin Tyagi, for their contribution to start kidney transplant programme at Holy Family Hospital, New Delhi.

KIDNEY TRANSPLANT UNIT: Dr. Anil Prasad Bhatt, Dr. L. N. Nayak, Dr. Bheem Raj Gupta & Dr. R. K. Choudhry

2ND ANNUAL CONVOCATION OF HOLY FAMILY COLLEGE OF NURSING

RENOVATED PEDIATRICS WARD

Holy Family Hospital recently inaugurated its renovated Pediatrics Ward. It is a 12 bedded ward with all standard facilities for treatment of children from 3 months to 12 years of age. The hospital already has dedicated Pediatric ICU and Ward on third floor of the hospital. This child friendly ward has been specially designed keeping in mind the needs of sick children. There is ample amount of natural light. The wall and doors are painted with pictures of birds, animals and numerous cartoon characters. Admitted children would surely be going to love this place, given its child friendly ambience. The department of paediatrics at Holy Family Hospital is headed by Dr. Sumbul Warsi. The treating team also include Dr. Sona Choudhary, Dr. Yogesh Parashar and Dr. Dinesh Raj. The department also runs a DNB training programme with 12 residents doctors.

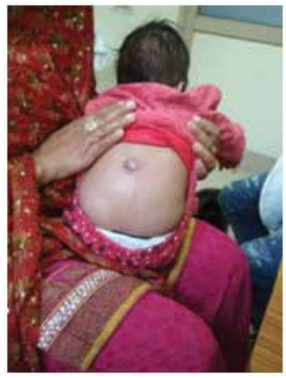
The Department also plans to start Early Intervention programme at its premises soon. Early Intervention aims to identify developmental disabilities at an early stage and provides suitable treatment and other supportive services. The eligible kids for early intervention are the high risk NICU graduates, children with developmental disabilities and other genetic disorders. The programme will equip infants and your children with special needs with improved motor, communication, social, self help and cognitive skill. The service is likely to start by first week of May 2018.

SOLITARY PLAQUE IN NEW BORN

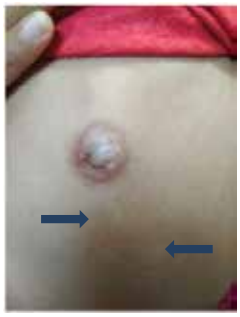
Dr. Sandeep Agnihotri, Sr. Consultant, Dermatology

A 4 month old male child presented with a round, erythematous plaque centrally over the back since birth. Two vague smaller papulonodules were also present since birth over the scalp. The lesions would periodically become more prominent and then subside to their pre-existing state. The mother reported occasional vesiculation over the lesion. There was no history of systemic complaints.

The lesions have gradually increased in size to attain their present dimensions.



A well circumscribed, indurated, erythematous, round plaque measuring 2.5 by 2.5 cms, situated over back adjoining the spine. Margins were well defined at places and merged with surrounding skin at others. The plaque had an irregularly smooth shiny surface highlighting a turgid, edematous interior. Two vesicles at 4o'clock and 9o'clock (deflated) can be seen (indicated by arrows in pic).



A punch biopsy (3mm) was done under short iv sedation and sent for h/p and immunohistochemistry.

Histopathology revealed sheets of mature looking mast cells with abundant cytoplasm densely infiltrating the papillary and reticular dermis. The infiltrate extended up to the subcutaneous fat and surrounding residual hair follicles and adnexal structures. No cytological atypia was seen. Eosinophils were seen scattered between these aggregates of mast cells. Toluidine blue stain highlighted the metachromatic granules in the mast cell cytoplasm.

On Immunohistochemistry, CD 117(c-Kit) was positive in Mast cells.CD68 was immunoreactive with a score of 2+, in lesionalcells.MPO tested non-immuno-reactive in lesional cells.

Diagnosis- Solitary cutaneous mastocytoma

Discussion-Mastocytosis is a disorder characterized by mast cell proliferation and accumulation within various organs; most commonly the skin. The World Health Organization (WHO) classification of Mastocytosis includes the following

- Cutaneous Mastocytosis - Urticariapigmentosa, maculopapular cutaneous Mastocytosis, diffuse cutaneous Mastocytosis, mastocytoma of skin.
- Indolent systemic Mastocytosis
- Systemic mastocytosis with an associated (clonal) hematologic non–mast cell lineage disease
- Aggressive systemic mastocytosis
- Mast cell leukemia
- Mast cell sarcoma
- Extra cutaneous mastocytoma [1, 2]

Solitary mastocytoma is one of the rarer form of cutaneous mastocytoma, the commonest variant being Urticariapigmentosa. It is typically seen at birth or shortly thereafter, but can also appear in older age groups. A positive Dariers sign on manipulation of the skin is seen as an urticating wheal or frank vesiculation .Adjoining skin may display urticarial dermographism. Treatment is usually unnecessary, antihistamines and Mast cell stabilizers can be used. Spontaneous resolution over months to years is the rule. Biopsy may be needed to differentiate it from juvenile xanthogranuloma,spitz nevi , an arthropod assault reaction or to differentiate it from the still rarer sarcomatous variant.

ORBITAL BLOWOUT FRACTURE/MEDIAL WALL

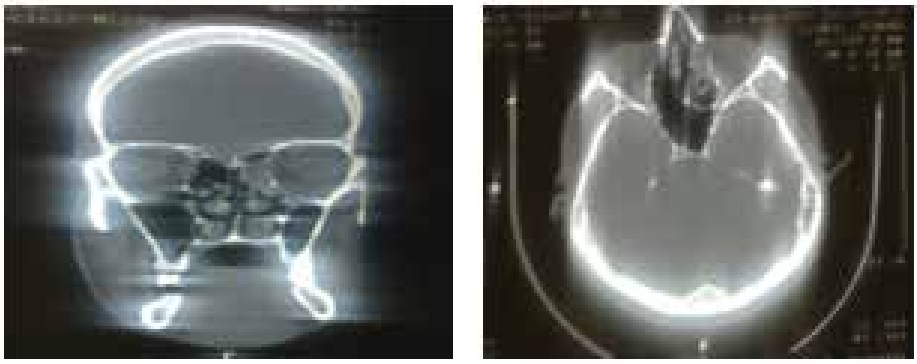
Dr. Praveen C. Bhatia (Sr. Consultant Eye Surgeon), Dr. Yogesh Jain (Sr. Consultant ENT Surgeon)

24 years old boy suffered a blunt injury (left) eye with a tennis ball. He presented with a severe pain more so on adduction. No complaints of redness, watering or diminution of vision.

On examination left eye anterior segment was normal. Ocular movements showed minimal restriction of adduction more so with pain. Visual acuity was 6/6.

Rt. Eye was normal with a vision of 6/6. He was put on anti-inflammatory and analgesic tablets but his pain continued to increase.

CT orbit was done which showed a fracture of lamina papyracea with incarcerations of orbital fat and suspected medial rectus.

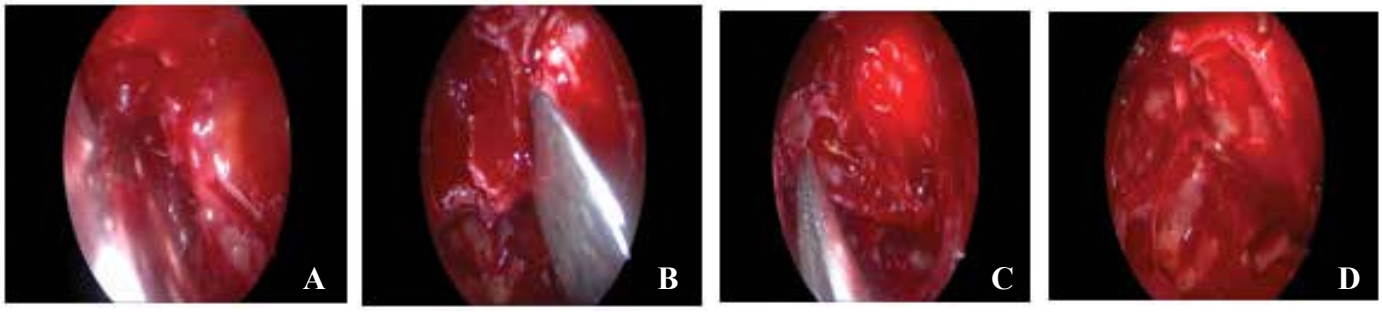


CT Orbit showing blowout fracture left medial wall of orbit

Since the ocular pain continued to increase with oral analgesics and oral steroids he was taken up for nasal endoscopic decompression.

Steps of the Orbital Decompression:

Patient was taken up for Nasal Endoscopic orbital decompression under General Anaesthesia. On initial Endoscopy, no trace of injury visualized in middle meatus. On doing Middle Meatal Antrostomy and Ethmoidectomy. The Lamina Papyracea found fractured medially along the posterior attachment of the Bullaethmoidalis.Fractured segment was seen to be lying obliquely with some herniation of periorbital fat. Fractured segment dissected out without disturbing the orbital content and fractured bone removed. Medial wall of orbit inspected posteriorly for any other injury but found to be intact. Nasal packing done for 48 hours. Patient became asymptomatic within 24 hours of surgery.



Fracture Left Medial wall of Orbit a] fracture segment b] mobilisation of fractured segment c] removal of fractured segment d] decompressed orbit

Normally blow out fracture results from blunt injuries more so in the floor of orbit or the medial wall. In most cases as the oedema of the orbital tissue regresses the patients symptoms of pain, swelling and restriction of movements improve. In this particular case it was not the restriction of movements or diplopia but the pain was the most troubling factor. The pain did not reduce inspite of potent analgesic/anti-inflammatory and oral steroids, the patient was taken up for surgical decompression and release of orbital tissues from the fracture site. This gave immediate relief to the patient.

RNI Ref. No. : 1288777

Anaesthesia / Pain Management	Neurology with Neurosurgery
Dental Clinic	Obstetrics and Gynaecology with Laparoscopic Surgery
Comprehensive Cardiology Service (Including Interventions)	Orthopaedics, Trauma and Joint Replacements
Dermatology	Paediatrics with IPCU & NICU
Emergency Services	Physiotherapy
Eye and ENT Surgery	Plastic and Vascular Surgery
Gastroenterology with Endoscopy	Psychiatry with Clinical Psychology
General, Laparoscopic and Paediatric Surgery	Radiology with CT and MRI
Intensive Care (ICU/IPCU/NICU)	Respiratory Medicine (Bronchoscopy, Sleep Lab, EBUS, Thoracoscopy, PFT-DLCO)
Laboratory Services	Thoracic Surgery
Medicine with ICU	Urology and Urosurgery
Nephrology and Dialysis	Alternative Medicine Including Homoeopathy & Ayurveda

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Editorial

Dr. Sanjay Sood, Sr. Consultant

In the 70th anniversary year, The theme of World Health Day on 7th April is: Universal health coverage: everyone, everywhere.

The slogan is "Health for All" But half the world's population is still unable to obtain the health services they need.

Universal health coverage is a sound investment for any country as the healthy citizens are the best human capital for development goals. Access to affordable essential quality health care not only enhances people's health and life expectancy, it also protects from epidemics, reduces poverty and the risk of hunger, creates jobs, drives economic growth and enhances gender equality.

We at Holy Family Hospital are committed to providing a affordable quality health care.

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