



NEWSLETTER



Gandhi Medical College & Hamidia Hospital, Bhopal (M.P.)

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WORLD



AMR

AWARENESS WEEK

18-24 NOVEMBER



CONTENTS

SPECIAL ARTICLE

MINI REVIEW

RESEARCH SNIPPETS

CLINICAL CORNER

STUDENT'S CORNER

EVENTS

AWARDS & HONORS

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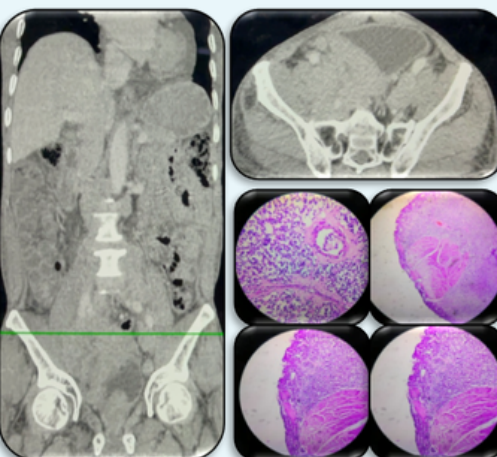
MRU Multi-Disciplinary Research Unit
Gandhi Medical College, Bhopal
Funded by: Dept of Health Research
MOFW, Government of India



GRAND RELEASE OF GMC BHOPAL NEWSLETTER

Gandhi Medical College, Bhopal on 19th November 2023 organized a science club meeting and released the institution's first newsletter, drawing a distinguished panel of guests, faculties and students.

NEUROENDOCRINE TUMORS AT RARE LOCATIONS



Neuroendocrine tumors are derived from neuroendocrine cells and peptidergic neurons. Mostly occurs in the gastrointestinal tract and broncho pulmonary tract, however any part of the body may act as the primary site. Here we are presenting two cases of it's presence at rare sites.

EDITORIAL BOARD**Dr Jaya Lalwani**Associate Professor
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GMC Bhopal**FOREWORD****FROM THE DEAN'S DESK**

Welcome to the second issue of our GMC Bhopal monthly newsletter! I am excited to share our latest newsletter with you, packed with our most recent achievements and updates. As we have already informed, this is a media to communicate with each other. So please feel free to write an article, share your views and experiences and be visible in this endeavor of our GMC Bhopal family. Be ready in the coming New year with new ideas for research and innovation. Happy Learning.



Dr Salil Bhargava
Dean & CEO
Gandhi Medical College
Bhopal

**IMPORTANT HEALTH DAYS IN NOVEMBER****Observed as****Day**

World Immunization Day

10th November

World Pneumonia Day

12th November

World Diabetes Day

14th November

National Epilepsy Day

17th November

Newborn Care Week

15- 21st November

World Antibiotic Awareness week

18- 24th November

World COPD Day

3rd Wednesday





**WORLD
DIABETES
DAY** 14 NOVEMBER



“Diabetes Care in India: A Technology-Driven Revolution”

DR PAWAN KARE
DEPARTMENT OF BIOCHEMISTRY

According to the International Diabetes Federation (IDF), 537 million adults (20-79 years) have diabetes in the world and 90 million adults in the Southeast Asia region. Of these 90 million adults, approximately 77 million belong to India. The increasing burden of diabetes in India is exerting immense pressure on the healthcare infrastructure. However, in the 21st century, India has emerged as a huge medical tourism hub in the world and technological development has taken huge strides in diabetic care. Some of the common technologies used by people with diabetes in India are blood glucose monitoring devices, insulin pumps, and continuous glucose monitors (CGMs).

Recent advancements in healthcare delivery technologies such as smartphone applications, telemedicine, m-health, remote patient monitoring, machine-learning technology and artificial intelligence have also played a significant role in diabetes care and are becoming efficient tools in controlling diabetes. A recently published report on “**Digital health and diabetes: experience from India**” reported that the diabetes community has been adopting various technologies such as connected glucose meters, continuous glucose monitoring systems, continuous subcutaneous insulin infusions, closed-loop systems, digitalization of health data, and diabetes-related apps for the prevention and management of the diabetic condition. Based on the International Diabetes Federation's (IDF) 2023 Atlas, the technological diabetic intervention only accounts for 15% in India whereas, the global technological intervention is 35%. There is a need to adopt new technologies and define a technology-driven policy for diabetic care in India, which will serve the huge diabetic population, the undiagnosed people, and people who have poor access to the health care system. Here are some of the ways in which technology is helping people in managing their diabetic condition.

The estimated usage of technology by people with diabetes in India

Technology	%
Blood glucose monitoring devices	70.0
Insulin pumps	10.0
Continuous Glucose Monitoring (CGM)	5.0
Mobile Health (mHealth) Apps	25.0
Remote Patient Monitoring (RPM)	2.0
Telehealth	1.0

Wearable devices:

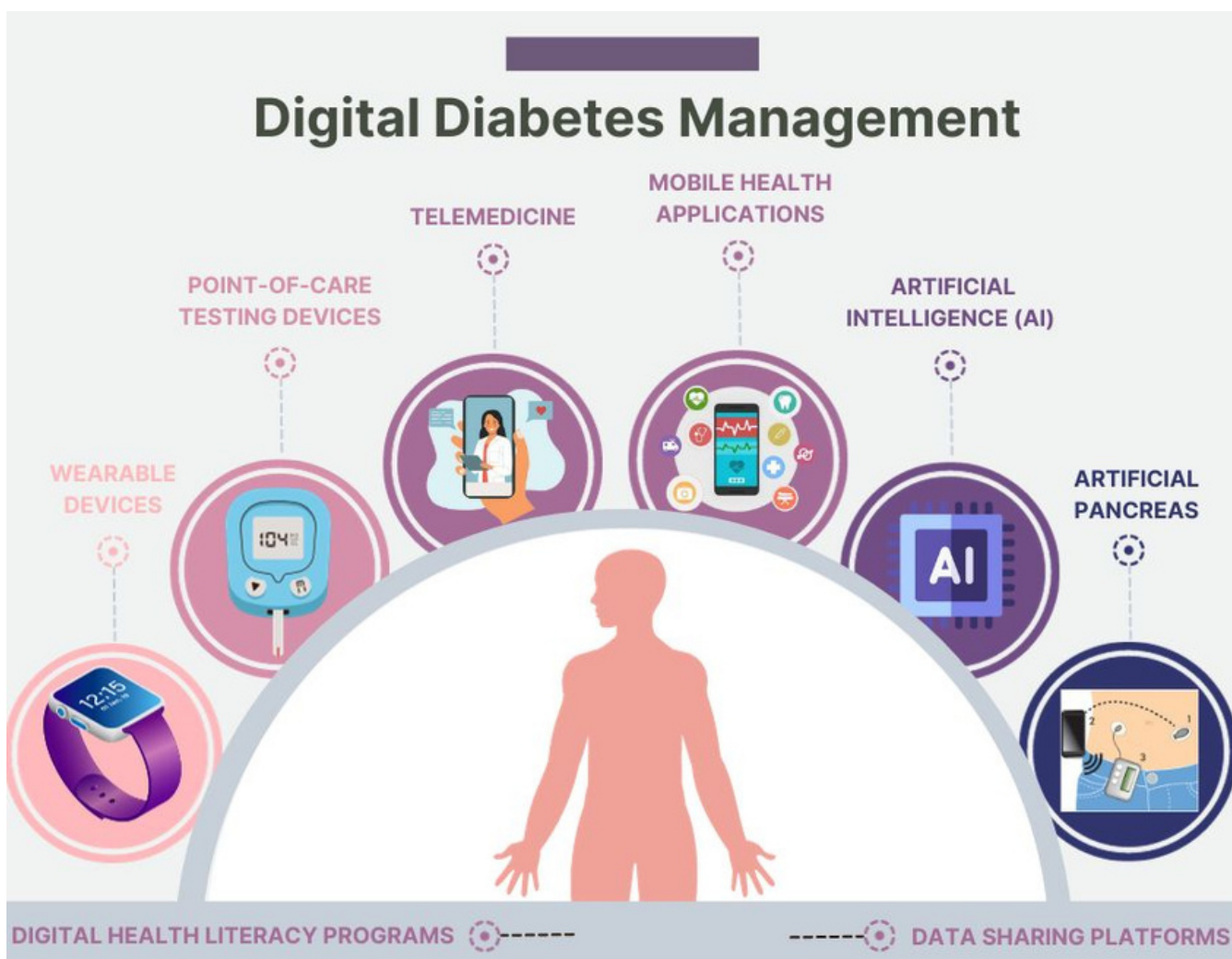
Continuous glucose monitors (CGMs), diabetes monitors, insulin pumps and smartwatches are wearable technology that can provide real-time data on blood glucose levels, physical activity, and other health parameters. This data is used to adjust insulin dosages, identify trends, and make lifestyle modifications.

Point-of-care testing devices:

Point-of-care testing (PoCT) is a way to achieve operational, clinical and economic benefits both for the patient and healthcare providers. PoCT devices allow rapid and accurate blood glucose testing in non-laboratory settings and facilitate “real-time” screening, diagnosis, and monitoring in diabetes care. Blood glucose meters are widely used for self-management by diabetic patients and also to monitor critically ill patients by physicians. The other PoCT devices which are available for measurement of HbA1c and to detect glucose, protein and ketone bodies in urine or blood.

Telemedicine:

In the modern era, telemedicine has made a significant impact on diabetic care which includes spreading awareness about diabetes, it has enabled patient monitoring, and providing a facility for remote real-time diabetic screening and management. The application of telemedicine through video conferencing or phone consultations has eased patient checkups, medication adjustments, and education from healthcare providers without having to travel long distances. In recent times Telemedicine has immensely supported healthcare providers across the world for diabetes management during the lockdown period. As per a survey report 30.6% of the patients with T2DM had utilized the telemedicine facility for consultation during the lockdown period in India.



Mobile health applications:

With an increasing number of mobile subscribers in the world, health management through mobile apps is fast becoming a popular and impactful solution for healthcare. Mobile health provides disease assessment, online monitoring, consultation and follow-up using text and video calling. These apps can also be used to collect patient data and transmit it to healthcare providers, enabling remote monitoring and timely interventions. Apps are available for both Android and iOS mobile devices. The apps enable the recording of glucose levels directly from the glucometer using a Wi-Fi connection. They also allow to record data related to daily food intake, body weight, physiological findings, and physical activity performed.

Artificial Intelligence (AI) and Machine Learning (ML):

AI and ML algorithms can analyse large datasets of patient data to identify patterns and predict health outcomes. Available reports show that the rapid progress in AI and ML has raised hopes for a more personalized, efficient, and effective approach for the management of diabetes mellitus.

Artificial Pancreas:

The artificial pancreas is an emerging technology that aims to automate insulin delivery for people with type 1 diabetes. It tracks blood glucose levels every few minutes using a built-in sensor and injects the required amount of insulin. This closed-loop system uses a CGM to monitor blood glucose levels and an insulin pump to deliver the appropriate amount of insulin to the body. The artificial pancreas is still under development, but it has the potential to revolutionize diabetes care. Artificial pancreas is also known as an automated insulin-delivery system, closed-loop system and bionic pancreas.

Language translation tools:

With so many dialects, communicating language has always been a barrier in our country. Language translation tools can break down the communication barriers between healthcare providers and patients who speak different languages. These tools will ensure that the patients receive correct and understandable required information for their diabetes care.

Digital health literacy programs:

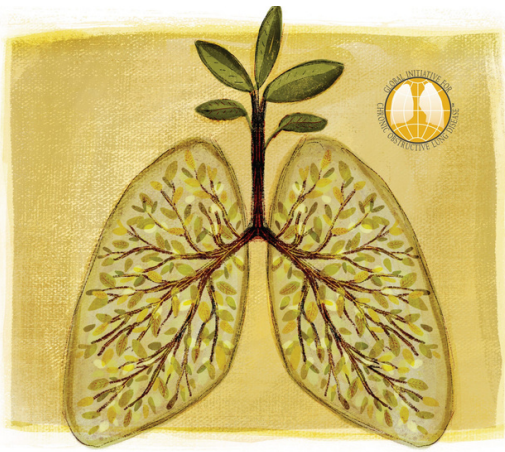
Digital health literacy among the population is key to teaching patients how to use technology to manage their diabetes effectively. This includes awareness about health apps, access to online information, telecommunication and adaptable technology.

Data sharing platforms:

Data sharing platforms can facilitate secure communication and exchange of patient health data between healthcare providers, researchers, and public health agencies. This improves care, coordination, and policy decisions, and accelerates research efforts.

Technology is rapidly evolving and transforming the way for diabetes management. However, implementing these technological solutions requires a careful multi-pronged approach that addresses infrastructural requirements, affordability, and digital literacy. Partnerships between government agencies, healthcare providers, technology companies, and non-governmental organizations are crucial to ensure that the benefit of technology reaches the diabetic population of India.

“Healthcare technology has the potential to change the world by enhancing the availability of healthcare, improving the integrity and equity of healthcare research, as well as improving the experience of patients and healthcare workers across the world.”



YOUR LUNGS FOR LIFE

"ADVANCEMENTS AND EMERGING TRENDS IN COPD RESEARCH AND MANAGEMENT"

Dr Vikas Mishra

Dr Parag Sharma

Dept of Respiratory Medicine

Chronic Obstructive Pulmonary Disease (COPD) has been a major global health challenge, affecting millions of individuals and presenting significant burdens on healthcare systems. In recent years, there have been notable advancements and emerging trends in COPD research and management, offering hope for improved diagnosis, treatment, and overall patient outcomes.

One noteworthy area of progress revolves around Precision Medicine Approaches. Researchers are increasingly recognizing the heterogeneity of COPD, understanding that it is not a uniform disease but rather a spectrum with diverse underlying causes and manifestations. This has led to a shift towards tailoring treatments to individual patients based on their unique characteristics. Genetic factors, biomarkers, and specific patient phenotypes are being explored to identify subgroups that may respond differently to various therapies. The goal is to move beyond a one-size-fits-all approach and usher in an era of personalized medicine in COPD care.

Early detection and intervention are crucial in managing COPD effectively. Ongoing research is focused on identifying Early Markers of COPD that can be detected before traditional symptoms become apparent.

This includes investigating novel imaging techniques, blood biomarkers, and advanced pulmonary function tests. By pinpointing signs of COPD at its incipient stages, healthcare professionals can implement interventions that may slow disease progression and improve long-term outcomes.

Understanding the intricate Inflammatory Pathways involved in COPD has been a focal point of recent research. Chronic inflammation plays a pivotal role in the development and progression of COPD. Investigating the specific inflammatory processes and pathways involved can lead to the development of targeted therapies aimed at modulating the immune response. This approach holds promise for mitigating the destructive effects of inflammation on lung tissues and potentially altering the course of the disease.

Preventing exacerbations is a key aspect of COPD management, given that these acute episodes significantly impact patients' quality of life and contribute to healthcare utilization. Researchers are intensively studying strategies for Exacerbation Prediction and Prevention. This involves identifying factors that precede exacerbations, such as changes in symptoms or biomarkers, and developing interventions to mitigate these events.

If successful, such strategies could lead to a substantial reduction in the frequency and severity of exacerbations.

The integration of Telehealth and Remote Monitoring technologies is transforming the landscape of COPD management. Telehealth platforms allow for real-time monitoring of patients' symptoms, medication adherence, and vital signs from the comfort of their homes. This not only enhances patient engagement but also enables healthcare providers to intervene promptly in response to emerging issues, potentially reducing hospital admissions and improving overall disease management.

In the realm of regenerative medicine, there is growing interest in exploring Lung Regeneration as a potential therapeutic avenue for COPD. This involves the development of strategies to repair damaged lung tissue and restore normal lung function. While still in the early stages of research, the prospect of regenerating lung tissue holds significant promise for individuals with advanced COPD where irreversible damage has occurred.

In conclusion, the field of COPD research is dynamic and continually evolving. The strides made in precision medicine, early detection, targeted therapies, telehealth integration, and regenerative medicine signal a hopeful future for individuals living with COPD. As these research trends progress, there is optimism that a more nuanced and effective approach to COPD diagnosis and management will emerge, ultimately improving the lives of those affected by this debilitating respiratory condition.

Basic Bronchoscopy Workshop by the Department of Respiratory Medicine



A workshop on Basic Bronchoscopy was organized on 4th November 2023 by the Department of Respiratory Medicine. It was the 1st time Bhopal witnessed an exclusive hands-on workshop on Interventional Pulmonology, for which 50 trainee postgraduate students came from all over India. The total number of trainees were more than 100, making it very successful hands-on workshop in the field of Pulmonology. The faculty of the department of Respiratory Medicine trained the participants on flexible bronchoscopy and different sampling techniques of taking biopsy and lavage for various respiratory diseases.

Title: Role of fetal hemoglobin in the development and progression of retinopathy of prematurity in preterm infants

Journal: Indian Journal of Ophthalmology, 2023.

Authors: Nishi Prasad, Aditi Dubey, Kavita Kumar, Jyotsna Shrivastava

Department: Department of Ophthalmology and Department of Pediatrics

Purpose: The objective of this study was to find the association between fetal hemoglobin (HbF) concentration and retinopathy of prematurity (ROP) in preterm infants. **Results:** A total of 410 preterm infants were included, out of which 110 infants had ROP (26.8%). Infants with ROP had significantly lower percentage of HbF with gestational age groups and birth weight groups, compared to infants without ROP. Higher percentage of HbF was associated with a lower prevalence of ROP. Higher concentration of HbF was found in the ROP infants who regressed spontaneously without treatment and less concentration was found in those who progressed to a severe disease and those who required treatment. The predictive ability of HbF (%) was 0.976 for ROP. **Conclusion:** Low fraction of HbF was found to be significantly associated with the development and progression of ROP.

Title: Study to Evaluate the Effectiveness of Ferrous Sulphate vs Ferrous Ascorbate in the Management of Anaemia in Pregnancy at Selected Districts of Madhya Pradesh

Journal: Global Journal for Research Analysis, 2023.

Authors: Akhil R Nair, Rama S Lodha

Department: Department of Community Medicine

Objectives: To study the sociodemographic factors associated with anaemia in pregnant women. To study the effectiveness of Ferrous sulphate vs Ferrous ascorbate in the management of anaemia in pregnancy. **Results** The mean change in haemoglobin level among FS group after three visits was found to be 0.30 ± 0.23 gm/dl, while it was 0.54 ± 0.32 gm/dl among FA group. The mean change in haemoglobin level was more in compliant when compared to non-compliant. And the mean change in haemoglobin level in compliant females of FA treatment group was 0.52 ± 0.30 gm/dl, and was higher than that of FS group, i.e. 0.37 ± 0.22 gm/dl. The difference observed was statistically significant. **Conclusion** Ferrous ascorbate was found better and effective in improving haemoglobin status, with better compliance and less adverse drug reactions.

Title: Clinicopathological Study with Topodiagnosis of Lower Motor Neuron Facial Nerve Palsy

Journal: International Journal of Scientific Research, 2023.

Authors: Abhishek Rajagopal, Smita Soni, Yashveer J. K, Kirti Y. K, Ritu Rani Vinodia.

Department: Department of Otorhinolaryngology

Background: Facial expression is a fundamental part of human communication and is one of the main means of expressing emotions and providing non-vocal intimation. Facial nerve has a long course intracranially and runs through a bony canal known as fallopian canal. Hence this makes it more susceptible to injury in comparison to other nerves in the body. **Aim:** To determine the etiopathological factors responsible for LMN facial nerve palsy and the most common level of facial nerve injury. **Conclusion:** Most causes of LMN facial palsy can be diagnosed clinically and early diagnosis with prompt treatment brings better results. FNP in cases of CSOM without cholesteatoma has better prognosis. Tympanic segment of facial nerve was seen to be more frequently involved.

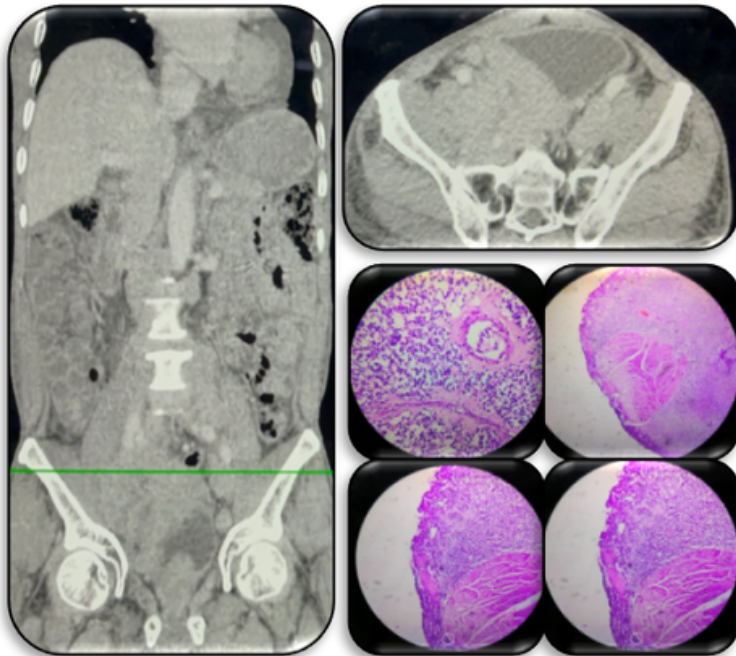


NEUROENDOCRINE TUMORS – ARE RARE LOCATIONS TRULY RARE ?

CASE REPORT: 1

- 45y/F, presented with abdominal pain & lump since 1 year.
- No other complaints.
- Physical examination: A non-tender, hard, irregular lump in the right hypochondrium, moving with respiration. No icterus.
- Investigations: Normal blood lab parameters with CECT show grossly distended GB with a large heterogeneously enhancing hypodense intraluminal mass (6x6.7x14.4 cm) with calcifications, indenting surrounding structures with lymphadenopathy.
- On exploration, a hard GB mass with multiple enlarged gastroduodenal, celiac and pericholedochal lymph nodes and deposits over the liver and omentum. Open cholecystectomy was done with omental biopsy and HPE reported as “*neuroendocrine tumour of gall bladder*”

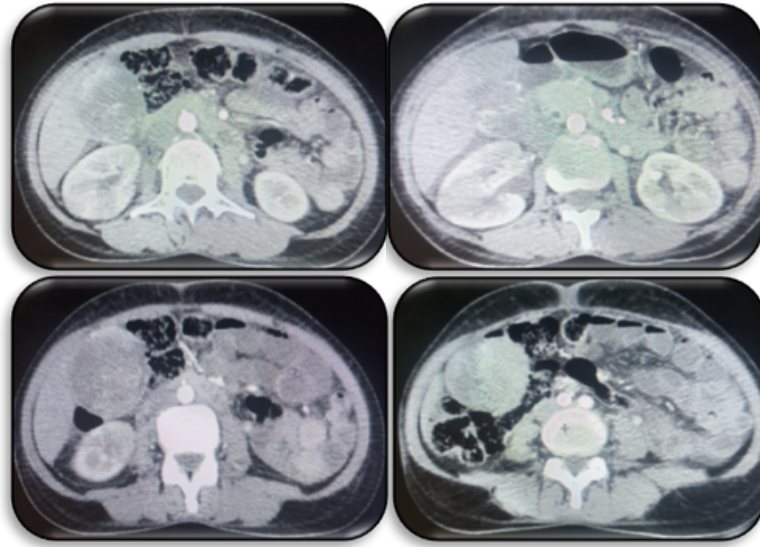
CONTRAST ENHANCED CT ABDOMEN (CECT) & HISTOPATHOLOGY OF CASE 2



CONCLUSION:

- NET are rare tumours and should always be kept in one of the differentials. The mainstay of treatment is surgical excision ± somatostatin analogues (Octreotide) / hormonal therapy/ target therapy/ Chemo-radiation. Some case reports with rare sites of these tumours are recently been added to the literature.

CONTRAST ENHANCED CT ABDOMEN (CECT) OF CASE 1



CASE REPORT: 2

- 62y/M, presented with abdominal distension, lower abdominal pain, constipation and weight loss since 3 months. No vomiting, malena.
- Physical examination: Lean and thin built, distended abdomen, no scar, no palpable abdominal lump. Digital rectal exam – Normal.
- Investigations: Mildly raised liver enzymes, rest of lab parameters were normal.
- USG: An ill-defined heterogenous mass in pelvic cavity infiltrating bladder and encasing right external and internal iliac vessel.
- CECT shows - An ill-defined heterogeneously enhancing pelvic lesion (7.5x8.4cm) infiltrating the right postero-lateral wall of bladder forming an intraluminal mass. Abutting recto-sigmoid, encasing bilateral external and internal lateral iliac vessels with pelvic, mesenteric and retroperitoneal lymphadenopathy.
- No hepatic/pulmonary mets.
- USG guided biopsy shows non-viable and necrotic tissue, hence cystoscopic evaluation with TUR biopsy done. HPE was reported as a “*neuroendocrine (carcinoid) tumour*”.

Dr Arvind Rai, Dr Devendra Choudhary, Dr Naveen Kumar Patbamiya, Dr Gunjan Priyanka Bara, Dr Akshara Rathore
Department of Surgery, GMC Bhopal



Milestone Achievement

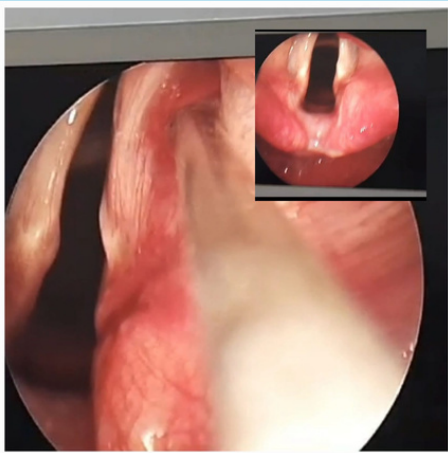
DEPARTMENT OF OTORHINOLARYNGOLOGY (ENT),
SUCCESSFULLY CONDUCTS FOLLOWING PROCEDURES FOR 1ST TIME

RHINOPLASTY SURGERY

As the septum goes, so goes the nose" A well-known phrase by Maurice Cottle forms the pillar of septoplasty. A domain of the ENT surgeon. This year the department of ENT has made new advances in their skills by adding Open Septorhinoplasty in their skill armamentarium.



FAT INJECTION FOR VOCAL CORD PALSY



Vocal cord paralysis is very debilitating, as the person loses his voice which adds character to his personality. To improve phonation in patients who do not recover, we made an attempt and the results were very promising. In this 40 yr old female patient vocal cord was paralyzed (idiopathic) with a very poor voice. By injection laryngoplasty we injected abdominal fat to medialise the cord. 1 week post op patient had a normal voice.

DEPARTMENT OF OTOLARYNGOLOGY (ENT)



**DID YOU
KNOW?**

The Department of Otolaryngology, GMC Bhopal, is well equipped with the Zeiss microscope and Karl Storz endoscope and camera systems for improved surgical efficiency. Variety of clinical procedures with micro-ear surgery, all rhinological procedures, microlaryngeal surgery, reconstructive and head & neck surgeries are being done in the department.

Family Adoption Program M.B.B.S. Batch 2022



The concept of the Family Adaption Program was introduced by NMC to provide an experimental learning opportunity for Indian Medical graduates towards community-based health care and enhance equity in health.

Our institute's M.B.B.S. 2022 Batch Family Adoption Program was started on 19th January 2023 under the supervision of the Department of Community Medicine. Bhopal city villages Kurana, Chandukhedi and Mubarakpur were selected and for each student, two families were allotted for the field learning on demographic, nutritional and environmental determinants of health regarding waste segregation, and animal livestock were done on frequent visits every month.

In collaboration with Forest Department Plantation drive was conducted in respective villages with allotted families and 450 saplings were planted.



एम.बी.बी.एस. बैच 2023 के छात्रों द्वारा केडेवरिक-शपथ

छात्रों ने केडेवरिक-शपथ में केडेवर को अपना प्रथम शिक्षक माना एवं ये शपथ ली कि केडेवर जो एक जीवित व्यक्ति था उसका वे सम्मान करेंगे साथ ही उसके प्रति सहानुभूति रखेंगे एवं गरिमा पूर्ण व्यवहार करेंगे। छात्रों ने यह भी शपथ ली कि, इसी का उपयोग करके वे अपने पेशे के लक्ष्यों को प्राप्त कर सकते हैं एवं समाज को गुणवत्ता पूर्ण स्वास्थ्य सेवा प्रदान करने एवं मानव जाति को आगे बढ़ाने की दिशा में दानदाता द्वारा किये गये कार्य का अनुसरण करेंगे। छात्रों ने केडेवर के परिवारजनों के प्रति भी आभार व्यक्त किया एवं इस दान को मृत्यु के बाद भी जीवित रहने का सबसे अच्छा उदाहरण बताया।



Nature's Ectasia: Keratoconic Lake View



This photograph represents various signs of keratoconus. The shiny reflex of the sun in the red cloud resembles Oil droplet reflex seen with direct ophthalmoscopy. The straight vertical lines of the fencing gate resembles Vogt striae of the deep stroma. The downward middle curve in the fencing gate resembles bulging of the lower lid in downgaze i.e Munson sign. **This photograph won first prize in the photography competition** on the occasion of World Sight Day organised by Young Ophthalmologists Society of India.

Submitted by **Dr Nishi Prasad, PG student (Ophthalmology)**



GMC Bhopal Marks White Coat Ceremony With Pledge To Serve Society With Compassion (19th October 2023)



Grand Release of GMC Bhopal Newsletter on 19th October 2023



A two day "PG Orientation Program" was conducted on 2nd & 3rd November 2023



Cascade Training for NTEP was Organized on 6th & 7th October 2023 by Dept of Community Medicine



On 19th October 2023, GMC Bhopal organised the Science Club on Antimicrobial agents: Friends or Foe

AWARDS AND HONORS

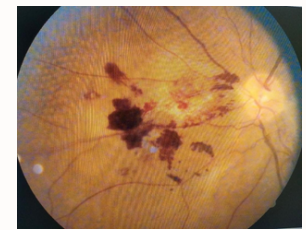


Dr Mitisha Soni, PG student (Microbiology) won first prize in the Oral presentation in MP-MICROCON 2023 held from 29th September to 1st October 2023 at Indore.

Dr Amir Munshi and Dr Shiva Shrivastava, PG students (Ophthalmology) won the divisional level quiz competition organised by Bhopal Divisional Ophthalmic Society on the occasion of World Sight Day on 12th October 2023.



Dr Nishi Prasad, PG student (Ophthalmology) won first prize in the photography competition conducted by AIIMS Bhopal



Posterior Segment Ophthalmic Photography



Dr Yogshri Chaube, PG student (Surgery) won the First Prize and an Award of Rs.50,000 in a Video paper presentation titled "Laparoscopic Cholecystectomy in Situs Inversus totalis" in National IAGES 2023 held at Bhopal, from 26th to 29th October 2023. This interesting case was operated by **Dr Mahim Koshariya**, Laparoscopic Cholecystectomy in Situs Inversus Totalis which is a rare congenital abnormality characterized by a mirror-image transposition of both the abdominal and the thoracic organs and is technically challenging to operate on, as all of the organs are on reverse/opposite side.

For more information

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