



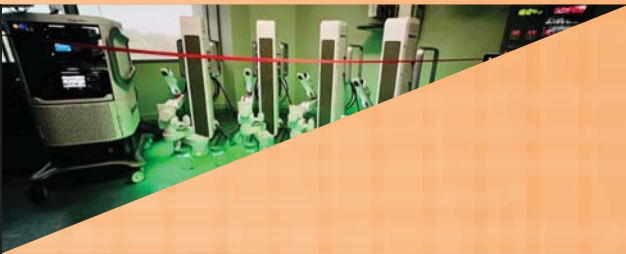
Sir Ganga Ram Hospital

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Robotic Surgery at SGRH: Achieving Newer Heights

In 2012, Sir Ganga Ram Hospital became one of the first few centres in the private sector to instal a surgical robotic system. A robotic surgery system includes a camera arm and mechanical arms with surgical instruments attached to them. The system installed at SGRH was da Vinci by Surgical Intuitive (Fig. 1), the only available and the pioneer system in the field of robotic surgery. The surgeon controls the arms while seated at a control centre, called a console, near the operating table. The surgeon sees a magnified, high-definition, 3D view of the surgical site. The movement of the surgeon's hands are replicated in real-time by the mechanical arm inside the patient's body without giving any big incision. This results in precise surgery and faster recovery.

In March 2012, we started doing robotic surgery and since then we have been using this surgical innovation for the benefit of our patients. The surgical robot can be used by multiple surgical specialties, including urology, general surgery, thoracic surgery, gynaecological, colorectal, paediatric surgery and others. As in all robotic programmes across the globe, urology was the spearhead of our programme, contributing more than 50% of the surgical work.

With every passing year we evolved ourselves and started utilizing the robot for various surgeries. Till March 2023, we completed more then 2200 robotic surgeries (Fig. 2).

In 2023, we further enhanced our capabilities by acquiring the Hugo RAS system (Fig. 3), a cutting-edge surgical robotic platform from Medtronic, the world's largest manufacturer of surgical devices. This addition has enabled us to perform over 300 procedures till date.

Our continuous focus on integrating advanced technology with compassionate care is central to our mission. We, in SGRH,



Fig. 1. SGRH adopted this cutting-edge technology in 2012, becoming among the first few centres in the private sector to instal the surgical robot

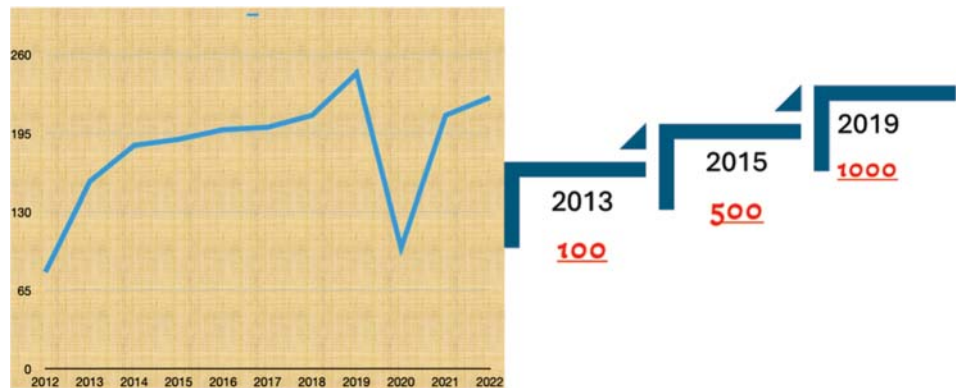


Fig. 2. The journey of robotic cases with exponential increase in numbers of such surgeries



Fig. 3. The Hugo RAS robotic system

again pioneered to adopt the newer technology of Hugo RAS and became the first centre in North India to adopt it.

We are now the busiest robotic centre in the Asia-Pacific region who are using this newer robotic platform in all major surgical

specialties. We explored the unexplored by using this new system and did some pioneering work across multiple specialties.

Our robotic surgery programme is a collaborative effort across multiple departments, including urology, general surgery, minimal access surgery, colorectal surgery, gynaecology, thoracic surgery, and oncology. This multidisciplinary approach allows us to provide comprehensive and innovative care, ensuring our patients' benefit from the collective expertise of our diverse medical teams.

SGRH has been in forefront of adopting any newer surgical

innovation that can expedite patient recovery and outcome. We have done it by starting the robotic surgery in 2012 and carrying this effort forward by not shying to adopt the newer variation and complete 2500 robotic surgeries. The 2500 smiling patients and their families encourage us to continue our efforts of delivering world-class surgical facilities at affordable price.

Contributed by Dr Vipin Tyagi
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Knee Pain – A Team Approach

Knee pain affects approximately 25% of adults. The prevalence of knee pain has increased almost 65% over the past 20 years, accounting for nearly 4 million primary care visits annually. The initial evaluation should emphasize excluding urgent causes while considering the need for referral. A standardized, comprehensive history and physical examination are crucial for differentiating the diagnosis. Non-surgical problems do not require immediate definitive diagnosis. Imaging and laboratory studies can play a confirmatory or diagnostic role when appropriate. This article reviews the initial evaluation of undifferentiated knee pain highlighting key findings of patient history and physical examination. The uses of and indications for radiography, musculoskeletal ultrasonography, magnetic resonance imaging (MRI), and laboratory evaluation are also addressed.

General practitioners, orthopaedic surgeons and rheumatologists are the core specialists who deal with knee pain. Approach to a patient with knee pain needs a holistic view from one or all of the mentioned specialists.

Most of the patients with traumatic knee pain will present

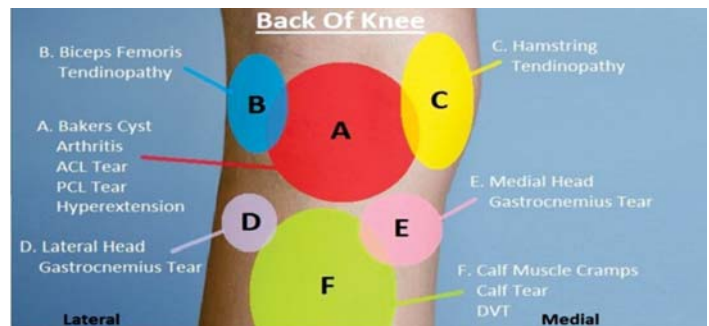
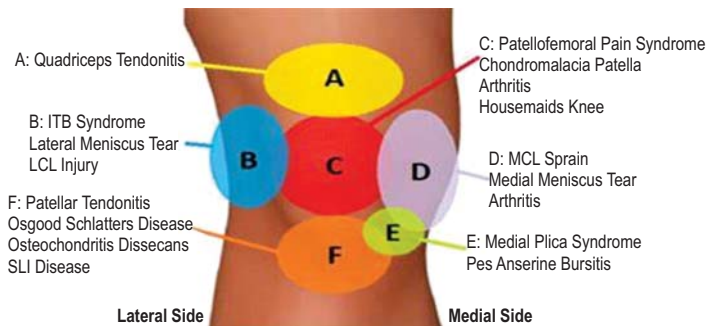
themselves at an orthopedic and trauma centre. Upon careful primary assessment according to the Advance Trauma Life Support, the patient is examined, investigated and diagnosed as soft tissue or bony injury with subsequent management of the same.

Patients with atraumatic knee pain usually present themselves to either a physician, orthopaedician or a rheumatologist. Any of these specialists can be the primary care providers for knee pain. For all practical purposes, atraumatic knee pain needs to be categorized into conditions needing immediate emergency care and those needing routine care.

Knee pain resulting from infectious causes usually in the form of acute osteomyelitis and septic arthritis are medical emergencies. The physician and orthopaedic surgeon need to work together in these situations. The aim is to avoid septicaemia and residual disease (chronic osteomyelitis, joint stiffness), if diagnosed late.

Patients with chronic knee pain present to any of the above specialties. All the specialists need to be well versed with the evaluation protocol of knee pain. Patients with mechanical knee pain are usually young active patients who because of active

Pain location	AGE (years)			
	9–15	15–30	30–60	60+
Pain on the front of the knee	Chondromalacia Osgood schlatters disease	Chondromalacia Patellar tracking issues Patellar tendonitis Fat pad irritation Nerve irritation	Osteochondral defect Patellar defect	Patellofemoral joint osteoarthritis
Pain on the inside of the knee	Medial meniscus tear Osteochondritis Medial collateral ligament tear	Pes anserine bursitis Osteochondral defect Medial collateral ligament tear	Medial osteoarthritis	Medial osteoarthritis
Pain on the outside of the knee	Lateral meniscus tear Osteochondral defect	Lateral meniscus tear Osteochondral defect Lateral collateral ligament tear	Lateral osteoarthritis Lateral patellofemoral osteoarthritis	Lateral osteoarthritis
Pain at the back of the knee	Meniscus injury Popliteal irritation Nerve injury Tumour	Popliteus syndrome Iliotibial band syndrome	Baker's cyst Popliteal aneurysm Sciatic referred pain	
Pain is difficult to locate	Referred nerve pain Tumour-related pain Knee joint infection			



Severe deformity corrected with knee replacement surgery

lifestyle and sports may develop meniscal injury, ligament sprains and cartilage injuries. These patients must be evaluated and referred in time to an orthopaedic surgeon for further management.

Degenerative knee pain, usually osteoarthritis, needs evaluation and medical management. Physicians and rheumatologists should be well versed with the course and prognosis of degenerative joint disease. They should be well versed with end-points of medical management for these conditions.

Referrals should be made in time to replacement surgeons since the advanced knee osteoarthritis leads to gait changes, which badly affect the spine.

Inflammatory knee pain characterized by pain and swelling in the knee, improvement with activity and involvement of small joints of hand and feet. Associated morning stiffness, backache and second half night pain all point to pain of inflammatory origin. After initial assessment and evaluation these patients should be referred to a rheumatologist for advanced care. The goal should be to avoid the crippling and disability which results from these conditions if neglected.

Total hip replacement was awarded as the Operation of The Century (19th) because of its success in bringing bed-ridden and crippled patients back to active life. Total knee replacement is well on its course to becoming the surgery of the 20th century. Primary care physicians and rheumatologists should refer the patients with advanced degenerative and inflammatory knee arthritis to replacement surgeons in time after the non-surgical measures are exhausted to improve the lifestyle of these patients.

Contributed by

Dr Anant Kumar Tiwari, Chairperson, Joint Replacement Surgery

Obstetrical Emergencies and Critical care Conference (OECC)

The Institute of Critical Care Medicine (ICCM), SGRH, in collaboration with NARCHI Delhi branch has conducted a successful second edition of 'Obstetrical Emergencies and Critical care Conference' OECC 2024 on 20 July 2024 under the guidance of Dr B.K. Rao and Dr Mala Srivastava as Organizing Chairpersons and Dr Prakash Shastri and Dr Vinod K. Singh as Chairman and Co-Chairman of the ICCM.

The Advisors of the conference were Dr Kanwal Gujral, Dr S.C. Sharma, Dr Ashok Anand and Dr Sanjeev Mittal. Dr Prasoon Gupta, Consultant, ICCM was the Organizing Secretary and Dr Debashis Dhar, Vice Chairman, ICCM was the Workshop Director. Dr Ajay Swaroop, Chairman, Board of Management (BoM) was the Guest of Honour and Dr D.S. Rana, Chairman, Board of Trustees was the Chief Guest for the programme.

The inauguration was attended by Dr Jayashree Sood, Vice

Chairperson, BoM; Dr A.K. Bhalla, Secretary, BoM; and other esteemed guests from the administration and clinical and non-clinical departments.

The conference was attended by more than 140 delegates and faculty, with surplus registration across Delhi NCR. The well-learned faculty taught the delegates about fine concepts of obstetric critical care in dedicated lectures and workshops along with various lifesaving manoeuvres. The conference was well appreciated by all the faculty from SGRH and other institutes along with delegates for smooth organization and core academic content.

The Organizing Secretary thanked all faculty and delegates across the board to make it a grand success for consecutively second year and closed the conference to come up with the third edition next year with the same zeal and enthusiasm.

Role of Next-generation sequencing in Haematology and Oncology

Next-generation sequencing (NGS) has revolutionized the field of medical research and clinical diagnostics, particularly in Haematology and Oncology. To achieve this objective at SGRH, the Department of Haematology and Molecular Medicine has started NGS since April 2024. NGS is a high-throughput technique that allows for the parallel sequencing of millions of DNA and RNA fragments. NGS can process vast amounts of genetic data in a single run. This ability to generate large-scale genomic data quickly and at a lower cost has made NGS a cornerstone of modern genomics.

NGS in haematology

In haematology, NGS has been instrumental in advancing the diagnosis and treatment of various blood disorders, including leukaemia (AML, MDS, ALL, MPNs, CML, CMML and JMML) lymphoma, and haemolytic anaemias. Recent updates to the World Health Organization 2022 classification (WHO 2022) and European Leukemia Net (ELN 2022) have expanded the subtypes of haematological malignancies defined by genetic aberrations, making targeted NGS panel assay even more critical. These conditions are clonally heterogeneous in nature and often involve complex genetic mutations that can be difficult to identify using conventional methods.

1. Diagnostic precision: NGS facilitates the comprehensive analysis of genes known to be associated with haematological malignancies. For instance, in acute myeloid leukaemia (AML), NGS can detect mutations in genes like FLT3, NPM1 and IDH1/2, which have significant prognostic and therapeutic implications. The ability to simultaneously sequence multiple genes enhances diagnostic accuracy and helps in the sub-classification of diseases, leading to more tailored treatment strategies. The lab offers various targeted panels (comprising both DNA mutations and fusions) for AML, MDS, CML, ALL, MPNs, CMML and JMML, which can be used for diagnosis, prognosis and therapeutic purposes.

2. Minimal residual disease (MRD) detection: One of the critical challenging areas of haematology is MRD detection in morphologically remission cases. NGS enables sensitive detection of MRD, allowing clinicians to monitor treatment response, predict relapse and adjust therapies accordingly. In the disease like AML, which was considered most severe form of leukaemia, can now be treated by targeted therapy and measurement of MRD can provide early evidence to modulate therapy accordingly. At SGRH, we provide NGS-based MRD assessment for better management of AML patients.

3. Inherited blood disorders: NGS is also crucial in diagnosing inherited blood disorders, such as sickle cell disease, thalassaemia



Fig. 1. Next-generation Sequencer Gene Studio S5 with Ion Chef

and other haemolytic anaemias. By identifying specific mutations in specific genes, NGS enables precise diagnosis, genetic counselling and opens avenues for gene therapy approaches.

NGS in oncology

In oncology, NGS has become a pivotal tool for understanding the genetic landscape of solid tumours, enabling the identification of driver mutation, clonal evolution and tumour heterogeneity, thus leading to the development of personalized cancer therapies. Multiple NGS-based targeted panels such as lung, colon, head and neck, breast, pancreatic, ovarian and cholangiocarcinoma, are running in the molecular medicine lab to help provide management of these patients by genetic mutation-based personalized therapy.

1. Comprehensive cancer profiling: Tumours often harbour multiple genetic alterations that drive cancer progression. NGS allows for comprehensive tumour profiling, identifying mutations, copy number variations, and gene fusions across a broad panel of cancer-related genes. This information is vital for selecting targeted therapies, such as tyrosine kinase inhibitors or immune checkpoint inhibitors, based on the specific genetic makeup of the tumour. We have the NGS-based comprehensive cancer gene profiling test, which allows assessment of tumour mutation burden (TMB), microsatellite status (MSI), loss of heterozygosity (LOH) and HRD status apart from consisting relevant >500 genes. HRD (homologous repair deficiency) testing is now being done for certain tumour types such as ovarian cancer. HRD status help guide treatment decisions, especially in the selection of therapies such as PARP inhibitors.

2. Liquid biopsy: NGS-based liquid biopsy is an emerging technique that analyses circulating tumour DNA (ctDNA) in the blood. This non-invasive approach enables the detection of genetic alterations associated with cancer. Liquid biopsies are particularly useful for monitoring disease progression and detecting resistance mutations without the need for repeated tissue biopsies. We are introducing the cell-free DNA panels for lung and colon cancer,

which help in doing the testing in the patient where biopsy sample is depleted.

3. Guiding immunotherapy and precision medicine: NGS plays a critical role in guiding immunotherapy, one of the most promising areas in cancer treatment. By identifying neoantigens (new antigens formed by tumour-specific mutations) that the immune system can target. It also enables precision medicine by revealing unique genetic profile. This information is used to select patients who are likely to benefit from immune checkpoint inhibitors.

4. Hereditary cancer syndromes: In addition to somatic mutations in tumours, NGS is also used to detect germline mutations associated with hereditary cancer syndromes, such as BRCA1/2 mutations in breast and ovarian cancers. Identifying these

mutations not only informs the patient's treatment but also has implications for family members who may be at risk. The lab provides testing of these germline mutation analysis on NGS.

Conclusion

Next-generation sequencing has a transformative impact on haematology and oncology. Its application in diagnostic precision, treatment selection, and disease monitoring has opened new avenues for personalized medicine, offering hope for better patient outcomes in the fight against cancer and blood disorders. Its continued evolution will further transform patient care and outcomes in these fields.

*Compiled by Dr Vandana Arya and Dr Jyoti Kotwal
Department of Haematology and Molecular Medicine*

Workshop on basic and advanced ultrasound-guided regional nerve blocks

The Institute of Anaesthesiology, Pain and Perioperative Medicine (IAPPM), SGRH under the aegis of the Indian College of Anaesthesiologists (ICA) and patronage of Dr Jayashree Sood, Advisor, IAPPM and Vice-Chairperson, Board of Management (BoM), SGRH organized a 2-day Workshop on basic and advanced ultrasound-guided regional nerve blocks from 6 to 7 July 2024. Dr Anil Jain, Chairman, IAPPM, SGRH and Dr Pradeep Jain, Co-Chairman and Director Pain Medicine, IAPPM, SGRH were the organizing chairpersons for the workshop. The workshop was inaugurated by Dr D.S. Rana, Chairman Sir Ganga Ram Hospital Trust Society; Dr Ajay Swaroop, Chairman BoM, SGRH; and Dr Anil Bhalla, Honorary Secretary BoM, SGRH.

The workshop was attended by 200 delegates from all over the country. Eighty-four eminent faculty members from across the country discussed the various intricacies of ultrasound-

guided nerve blocks and shared their rich experience with the delegates. A total of 25 high-precision ultrasound machines were procured for the workshop. In addition to hands-on practice sessions for the delegates, live demonstration of basic and advanced level nerve blocks was also done from the operation theatre. Preceding the workshop an intensive 2-month biweekly sessions of online didactic lectures were held for the delegates from 4 May to 28 June 2024. The Indian Diploma in Regional Anaesthesia (IDRA) exit examination was also held during the course of the workshop.

The regional anaesthesia training programme now in its third year of existence has gained immense popularity all across India and has brought laurels to our great institution. The ideology behind the programme is to spread awareness about 'Pain-Free Hospital and Opioids-Free postoperative period'.

The Delhi State Chapter of the Association of Surgeons of India (ASI) organized a Voluntary Blood Donation Camp in association with the Department of Blood Bank and Transfusion Medicine, SGRH led superbly by Dr Vivek Ranjan, Chair and HoD and Dr Kamini Khillan, Vice Chair of the department on 21 April 2024. Almost 40 volunteers had come and donated blood for this benevolent cause. Dr P.S. Sarangi, President Delhi State Chapter of ASI and HoD, DDU Hospital had led from the front to make the event successful. A big thanks to the Board of Management of SGRH and the administration for their permission and support towards the blood donation camp. And finally thanks to all the volunteers including residents of the department who took time out of their schedule for the benevolent cause.

The Institute of General, Laparoscopic, and Laser Surgery, SGRH, on behalf of the Association of Surgeons of India (ASI) Delhi Chapter, organized a Live Operative Workshop on Inguinal and Ventral Hernia Repair on 29 August 2024, under the SEPA initiative of ASI. The workshop encompassed live operative OT experience and one-to-one interaction with the delegates. The surgeries included TEP, TAPP, ETEP for inguinal hernia, IPOM Plus, Patch Mesh Lap Assisted and Etep-RS for Ventral Hernias.

Dr Tarun Mittal, Dr Ashish Dey, Dr Anmol Ahuja, Department of Laparoscopic, Laser and General Surgery

Case Report

Tackling traumatic eyelid injuries

Injuries of the face, especially those that involve the eyelids are fairly common. Involvement of the eyelids and surrounding area constitutes a special problem in management. A well done primary management is extremely successful in restoring anatomy, function and cosmesis to eyes and face. Primary management prevents deformities, which can have profound consequences for vision and for aesthetics of the face.

However, if deformities occur due to inadequate or delayed primary repair, the management becomes more complex. This communication brings out how a skilled management of deformities can restore back structure, preserve visual function and improve aesthetics.

Traumatic deformities of the eyelids may occur in the form of: (a) Marginal misalignments, (b) Eyebrow malpositions, (c) Traumatic canthal deformities, (d) Traumatic ptosis (drooping of eyelids), (e) Eyelid retraction, (f) Traumatic eyelid defects, and (g) Cicatricial ectropion (out-turning of the eyelids).

a. Marginal misalignment may occur due to delayed wound repair. Spontaneous wound healing may result in lid notching, in-turning or out-turning of the eyelids. This in turn may lead to redness, irritation, pain, foreign body sensation and other dry eye symptoms due to exposure. This can be managed surgically by late primary re-suturing (Fig. 1a and 1b) or secondary repair.

b. Eyebrow malposition: Trauma to the forehead may result in misplacement of eyebrows. Surgical correction of malpositioned eyebrow often entails a long incision on the forehead and/or frontal scalp for scar release followed by re-alignment and re-attachment of the eyebrows (Fig. 2a and 2b).

c. Traumatic canthal deformities: Canthus refers to the inner and outer corners of the eye. Traumatic canthal deformities can occur due to either soft tissue deformities or as naso-orbito-ethmoid bone fractures. Soft tissue deformities may require a variety of different techniques to tackle the deformity. These include correction of telecanthus through skin approach with Y to V plasty and posterior fixation of medial canthal tendon (Figs 3a, b; 4a, b).

Telecanthus refers to an increase in the distance between the inner corners of eyelids (medial canthi). Telecanthus with associated bony deformities are treated by internal fixation of medial canthus. This can be done by either internal trans-nasal wiring or using mini plates (Figs 5a, b; 6a, b; 7a, b).

d. Traumatic ptosis: Ptosis refers to drooping of upper eyelid. It can occur due to direct injury to the Levator muscle/Muller's muscle. Ptosis secondary to blunt trauma may resolve spontaneously over time. However, surgical repair may be required if ptosis persists beyond 6 months. The choice of surgery is based on the amount of



Fig. 1. Management of marginal misalignment. **a.** Preoperative **b.** Postoperative



Fig. 2. Management of eyebrow malposition. **a.** Preoperative **b.** Postoperative

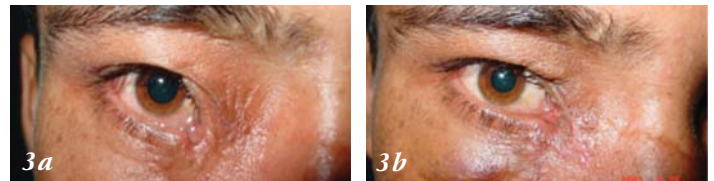


Fig. 3. Management of downward displaced canthus with traumatic telecanthus by Z-plasty with medial canthus transposition. **a.** Preoperative **b.** Postoperative

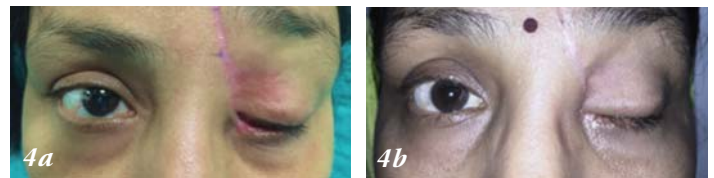


Fig. 4. Scalp and forehead scar involving medial canthus with telecanthus, anteriorly displaced medial canthus and asymmetric brow position is corrected by scar revision and medial canthal re-positioning with titanium mini plates. **a.** Preoperative **b.** Postoperative

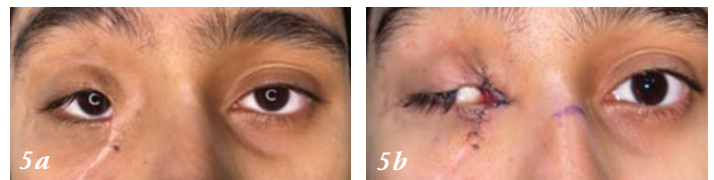


Fig. 5. Management of traumatic telecanthus with associated bony deformities; corrected by Y to V plasty with internal fixation of medial canthus by microplating at the post lacrimal crest. **a.** Preoperative **b.** Postoperative

ptosis. Options include Fasanella Servat surgery, strengthening/re-attachment of levator aponeurosis or frontalis sling procedures, wherein the levator muscle is suspended from the frontalis muscle on the forehead (Fig. 8a, b).



Fig. 6. Management of bilateral traumatic telecanthus with chronic dacryocystitis associated with bilateral traumatic NLDO: Scalp bicoronal flap approach – bone grafting with trans-nasal wiring with both eyes dacryocystorbinostomy (DCR). **a.** Preoperative **b.** Postoperative

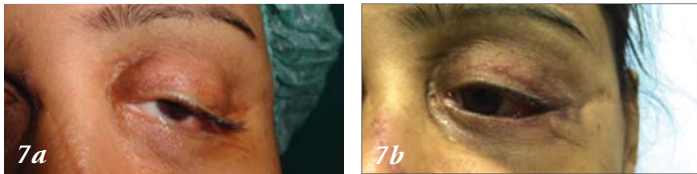


Fig. 7. Management of traumatic lateral canthal displacement: Lateral canthal repositioning with posterior lamellar hard palate graft. **a.** Preoperative **b.** Postoperative

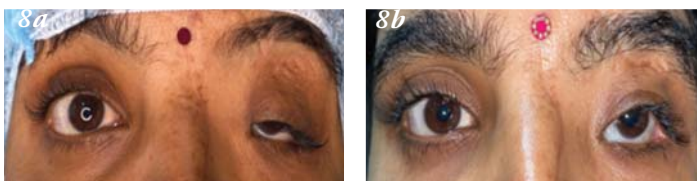


Fig. 8. Management of traumatic telecanthus with ptosis: Canthal tendon refixation and ptosis correction by Silastic sling. **a.** Preoperative **b.** Postoperative

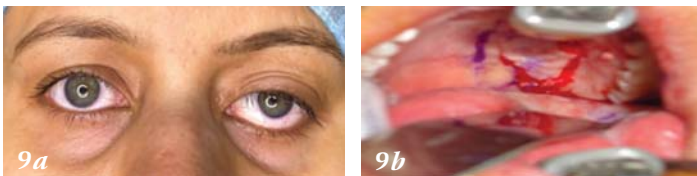


Fig. 9. Management of lower lid retraction: Hard palate graft with release of lower lid retractors. **a.** Preoperative **b.** Harvesting hard palate graft **c.** Postoperative

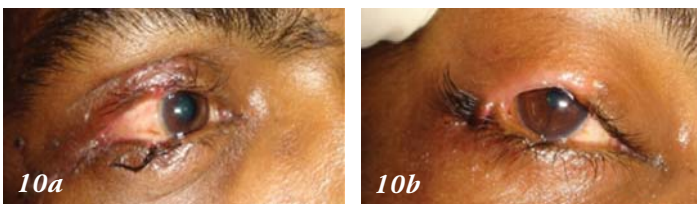
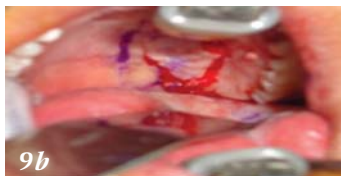


Fig. 10. Management of traumatic upper lid coloboma and lateral canthus misalignment: Tenzel's repair. **a.** Preoperative **b.** Postoperative



Fig. 11. Correction of cicatricial ectropion upper lid using epidermal graft. **a.** Preoperative **b.** Postoperative



Fig. 12. Management of cicatricial ectropion lower lid with full thickness skin graft. **a.** Preoperative **b.** Postoperative

e. Eyelid retraction: Lower lid retraction is a condition where the lower lid margin is displaced inferiorly, resulting in increased exposure of the eye surface to the environment. This can present with dry eye symptoms and can lead to corneal infection and ulceration. It can be managed initially by alleviating the dry eye symptoms and more permanently via surgery. Surgical options include release of lower lid retractors along with either a spacer graft or a skin graft (Fig. 9a, b, c).

f. Traumatic eyelid defects may either be non-marginal, partial thickness defects, full thickness defects or defects involving lateral canthus or medial canthus. Surgical correction includes direct closure with or without mobilization of surrounding tissue for small defects and reconstruction of anterior lamella (using skin muscle layer by using skin flaps) and/or posterior lamella (using tarsoconjunctival flap/free mucous membrane graft) for large defects. Closure is done in layers with extra care for the marginal sutures (Fig. 10a, b).

g. Cicatricial ectropion: Ectropion refers to outward turning of the lid margin. Cicatricial ectropion occurs when there is shortening of the anterior lamella of lid due to scarring. Factors include trauma, burns, surgery such as blepharoplasty, skin diseases or age-related changes that result in the loss of skin elasticity. Surgical management involves release of the scar tissue and lengthening of anterior lamella with transposition flaps or skin grafts (either full thickness or epidermal grafts) (Figs 11a, b; 12a, b).

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Anaesthesia and Artificial Intelligence

'Artificial intelligence is not a substitute for human intelligence; it is a tool to amplify human creativity and ingenuity.' - Fei-Fei Li

Artificial intelligence (AI) refers to the capacity of a computer or device to analyse major and intricate healthcare data, identify valuable information, recognise potential dangers and options, and assist in better decision-making.¹

Artificial intelligence has added to anaesthesia's technological and creative legacy. Medical outcomes, efficiency, and cost may improve using AI and machine learning. This technology aids anaesthesiologists in making proactive operating room decisions and situations. AI is poised to play a significant role in the future of anaesthesiology. The areas being explored include assisting in monitoring the depth of anaesthesia throughout surgery, monitoring patient vitals in real-time, and adjusting dosages accordingly.

Anaesthesiologists can benefit from AI's ability to analyse patient data to anticipate dangers and occurrences, which allows them to take preventive actions. AI also contributes to the accuracy of ultrasound, a widely used technique in anaesthesiology for procedures like nerve blocks. There are enhancements in patient comfort and recovery rates resulting from AI-facilitated pain evaluation and control. AI can transform operating room logistics by improving the effectiveness of scheduling and resource allocation.²

To improve patient safety and treatment quality in healthcare, the Institute for Healthcare Improvement established the Triple Aim in 2008.³ Better patient care, population health, and cost reductions were its goals. After studies indicated that professional involvement and tiredness were related to safety events and impaired treatment quality, the Quadruple Aim incorporated clinician well-being in 2014.⁴ Accrediting authorities like the National Committee for Quality Assurance and the Joint Commission accepted the Triple Aim and Quadruple Aim. The 2022 Quintuple Aim named health equality its sixth target. This recognised the need to monitor, examine, and remove inequities to provide high-quality, safe patient care and other purposes.⁵ According to the Quintuple Aim, AI is essential to perioperative patient safety. In the complex modern healthcare system, AI may help anaesthesia doctors achieve the

Quintuple Aim's five goals. This may improve perioperative safety and quality.¹

AI-enhanced methodologies can improve patient outcomes and ensure safety within the field of clinical anaesthesiology. Unlike other AI applications where algorithmic errors may result in reduced internet traffic or financial setbacks, the use of AI in the healthcare sector has the potential to do damage to individuals. Hence, to

enhance the application of AI in anaesthesia, it is important to develop a comprehensive plan and conduct a meticulous review of implementation. By actively developing and evaluating AI-driven solutions, we may strategically use AI technology to enhance patient care in perioperative medicine.⁶

Artificial intelligence can help anaesthesiologists, but it cannot replace them. Anaesthesiologists' knowledge and discretion, together with the human aspect of medicine, are vital. AI is available to bolster and improve upon this effort.

Anaesthesiologists can benefit from AI's ability to analyse patient data to anticipate dangers and occurrences, which allows them to take preventive actions. AI also contributes to the accuracy of ultrasound, a widely used technique in anaesthesiology for procedures like nerve blocks.

'AI is a tool. The choice about how it gets deployed is ours.'
- Oren Etzioni

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Dr Chand Sahai, Retired Consultant
Institute of Anaesthesiology, Pain and Perioperative Medicine



HOSPITAL NEWS

Dr Tarun Mittal, Senior Consultant and Vice-Chairman; Dr Ashish Dey, Senior Consultant; and Dr Anmol Ahuja, Consultant, Department of Laparoscopic, General and Laser Surgery, SGRH organized skill enhancement workshop for perianal diseases (SEPA) under the banner of the Association of Surgeons of India at the OT complex of SGRH on 6 June 2024. It was attended by eight surgeons from Delhi NCR.

Dr D.S. Rana, Chairman Sir Ganga Ram Hospital Trust Society and Chairman Institute of Renal Sciences, SGRH and Dr A.K. Bhalla, Honorary Secretary, Board of Management (BoM) and Chairman Department of Nephrology, SGRH, founder and president respectively of the newly launched Indian Society of Onconephrology along with Dr Ajay Swaroop, Chairman BoM, SGRH, Dr Harsha Jauhari, Chairman, Department of Renal Transplant, SGRH, and Dr Ashwani Gupta, Co-Chairman Department of Nephrology, SGRH inaugurated the Onconeph Update 2024 endorsed by the American Society of Onconephrology at the Taj Mansingh Hotel held on 8–9 June 2024. The Update was attended by more than 200 delegates from across the country.

The Department of CT and MRI, SGRH and the Department of Radiology, All India Institute of Medical Sciences (AIIMS) New Delhi co-organized the 2nd National CME of subspecialty Gynecological Imaging and Interventions, with this year's theme 'Uterine Imaging' on 19 August 2024, which was a remarkable success. This significant educational activity was held under the esteemed leadership of Dr Seema Sud, Senior Consultant, Department of CT and MRI, SGRH (Organizing Chairperson) and Dr Smita Manchanda, Professor, Department of Radiology, AIIMS (Organizing Secretary). Dr Swapnil Sheth, Consultant, Department of CT and MRI, SGRH was the Co-organizing Secretary. The event witnessed an impressive turnout of 170 delegates and faculty and also featured over 50 oral presentations and posters, reflecting the changing interest in the subspecialty of radiology.

The Department of Intervention Radiology, SGRH successfully conducted a live workshop on Thyroid Ablation on 28 June 2024. A total of 31 intervention radiologists from across India attended the Workshop.

The Department of Plastic Surgery at SGRH celebrated 'World Plastic Surgery Day' on 15 July 2024 in the hospital and at Bal Bharati Public School, Delhi. A Plastic Surgery Education Awareness Programme was held in the school auditorium for the students of classes X and XI, in two batches of 400 students each, wherein awareness was imparted regarding the spectrum of plastic surgery and management of

common household injuries in the form of a 40-minute presentation. Also, 20–25 posters were displayed depicting the same. The event concluded with an interactive Q&A session.

The Institute of Gastroenterology and Hepatobiliary Sciences (IGHBS), SGRH organized the 7th Annual Congress of the Indian Neurogastroenterology and Motility Association (INMA) under the Chairmanship of Dr Anil Arora, Chairman, IGHBS, SGRH on 22–23 June 2024. There were more than 700 registrations from across the country with 75 submissions for plenary and interesting case sessions.

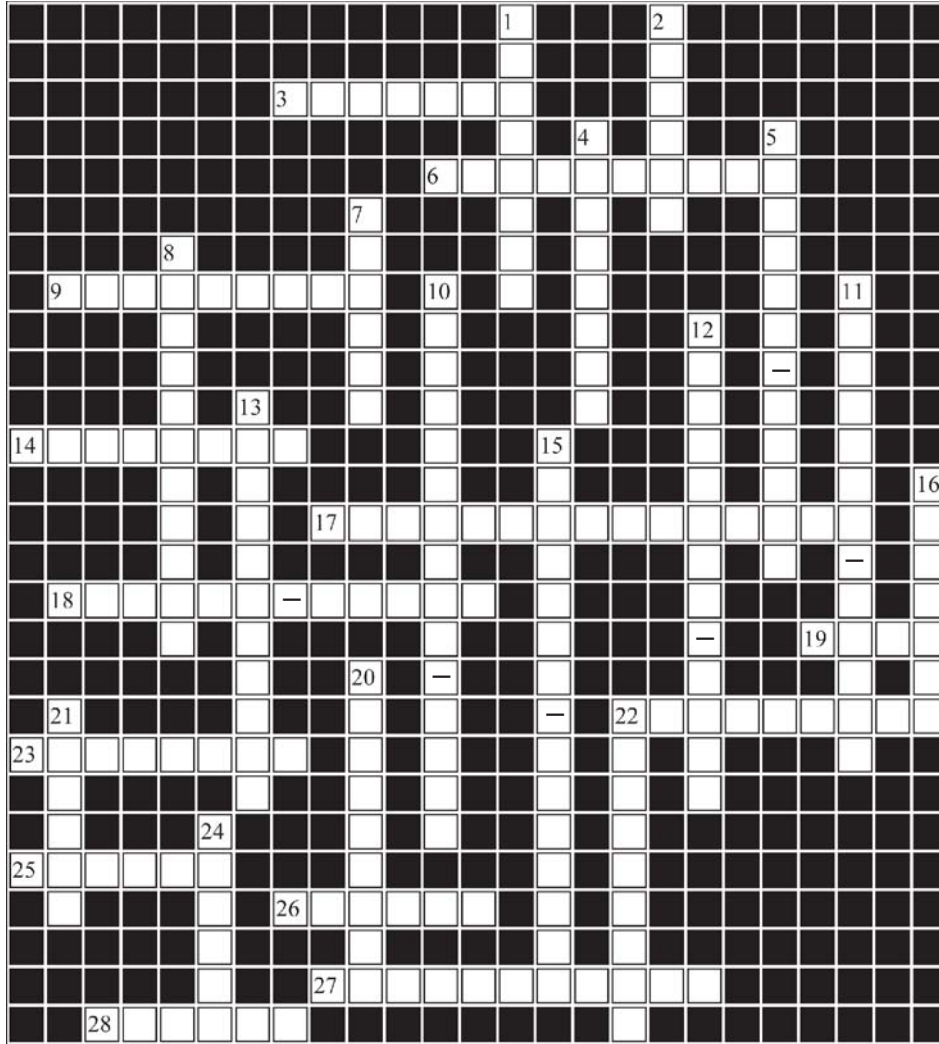
The Department of Dermatology, SGRH, organized a Continuing Medical Education (CME) programme on 'Dermatology in Women's Health' on 1 September 2024. The CME focused on topics exploring the intersection of dermatology and gynaecology, addressing common concerns and fostering collaboration between these two essential fields.

The newly renovated auditorium at Sir Ganga Ram Hospital was reopened on 1 July 2024. The auditorium is equipped with latest state-of-the-art projection and sound system. The auditorium will now function under the GRIPMER Academic Department. All the departments can organize their academic and training activities in the auditorium. All company-sponsored academic events such as CMEs, conferences and workshops will be chargeable and a fixed fee will have to be deposited with the GRIPMER office by the concerned department. However, there will be no charges levied on departmental and GRIPMER-sponsored academic activities such as seminars, tutorials, and GRIPMER monthly meetings.

Dr Aditya Sarin, Consultant Department of Medical Oncology, SGRH, has been honoured with the Times of India Young Oncologist of the Year award at the Times of India Health Conclave and Award Function.

Dr Jayashree Sood, Vice-Chairperson, Board of Management and Advisor, Institute of Anaesthesiology, Pain, and Perioperative Medicine, SGRH, was felicitated by the Indian Society of Anaesthesiologists, Delhi Branch on the occasion of Teacher's Day on 5 September 2024. The Paediatric Haematology Oncology unit of SGRH signed an MoU with Coal India supported by the Ministry of Health and Family Welfare (MoHFW) and Thalassemics India on 9 September 2024. As per this MoU, SGRH is now an empanelled hospital for Thalassemia Bal Sewa Yojna. This scheme will provide Rs 10 lakh for every bone marrow (stem cell) transplant through the CSR fund of Coal India.

Newsletter Crossword



Across

3. Reactive molecules, causing damage to cellular elements, cause inflammation (7)
6. Proteins that are part of natural defences (10)
9. A diagram that summarizes stages of sleep recorded in a sleep lab (9)
14. Abnormal but harmless mass of tissue, usually nerve cells (8)
17. Too much iron is absorbed and stored (15)
18. A syndrome where there is need for excessive sleep, excessive food intake and behaviour changes (6-5)
19. Sensation that comes just before the occurrence of a medical problem, e.g. migraine (4)
22. Two muscles running from the end of spine to the thigh bone (9)
23. Deficiency causes diarrhoea, dementia and dermatitis (8)
25. Part of retina that controls sharp, straight ahead vision (6)
26. A man whispered into his friend's ear that blood flow was making abnormal sounds (6)
27. Blurry vision caused by irregular curve of the cornea (11)
28. Enzyme digesting proteins in the stomach (6)

Down

1. Changes in the DNA sequence of a cell (8)
2. Cells that produce mucous (6)
4. Grating, grinding or popping sound (8)
5. Name based on mythical mermaid, causing congenital central hypoventilation syndrome (6-5)
7. Narrow band of tissue that circles the cornea (6)
8. Group of cytokines expressed and secreted by WBCs and other cells (11)
10. A hydrating sugar secreted by cells (10-4)
11. Clear fluid that fills front portion of the eye (7-5)
12. A small muscle associated with hair follicle that enables hair to stand on end (8-4)
13. Peripheral sensory neurons (11)
15. Thickening of the tissue around the nerve leading to the toes (7-7)
16. Phenolic compounds in plant-based diets, function as free radical scavengers (7)
20. Virus transmitted by mosquitoes or other members of arthropod family (9)
21. A disease causing endemic cardiomyopathy, most prevalent in low-income regions of China (6)
22. Contraction of muscle but muscle does not change length, the affected joint also does not move (9)
24. Abnormal layer of fibromuscular tissue (6)

Created by Dr P.K. Pruthi, Institute of Child Health

Pearls of Wisdom

*Yesterday is a cancelled cheque, Tomorrow is a fixed deposit
But*

*Today is the cash payment -
Can't recall yesterday; Can't use tomorrow
So why not live today, enjoy and be happy.*

*Dr S.P. Byotra, Advisor
Department of Medicine and Member, Sir Ganga Ram Trust Society*

NEW ENTRANTS

Dr Abhishek Mitra *Institute of Surgical Gastroenterology, GI & HPB Onco-Surgery
Honorary Active Visiting Consultant 09.07.2024*

Dr Subhashish Das *Institute of Surgical Gastroenterology, GI & HPB Onco-Surgery
Associate Honorary Active Visiting Consultant 09.07.2024*

Dr Himanshu Goel *Cardiac Surgery Associate Honorary Active Visiting Consultant (Ad hoc) 09.07.2024*

Dr Suvendu Sekhar Jena *Institute of Surgical Gastroenterology, GI & HPB Onco-Surgery
Associate Honorary Active Visiting Consultant 13.07.2024*

PROMOTIONS

Dr Alok Kumar *Department of Anaesthesiology, Pain & Perioperative Medicine
Senior Honorary Active Visiting Consultant 08.07.2024*

Dr Mithilesh Kumar *Department of Anaesthesiology, Pain & Perioperative Medicine
Senior Honorary Active Visiting Consultant 08.07.2024*

Dr Anirban Roy *Department of Anaesthesiology, Pain & Perioperative Medicine
Senior Honorary Active Visiting Consultant 08.07.2024*

Dr Apurva Srivastava *Department of Vascular and Endovascular Surgery
Honorary Active Visiting Consultant 29.07.2024*

CROSSWORD ANSWERS

ACROSS: 3. Oxidant 6. Interferon 9. Hypnogram 14. Ganglion 17. Hemochromatosis 18. Kleine-Levin 19. Aura 22. Iliopsoas
23. Pellagra 25. Macula 26. Murmur 27. Astigmatism 28. Pepsin

DOWN: 1. Mutation 2. Goblet 4. Crepitus 5. Ondine-Curse 7. Limbus 8. Interleukin 10. Hyaluronic-Acid 11. Aqueous-humor
12. Arrector-Pili 13. Nociceptors 15. Mortons-Neuroma 16. Lignans 20. Arbovirus 21. Keshan 22. Isometric 24. Pannus

We welcome your comments. Please send us your feedback at sgrhnewsletter@sgrh.com

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