LILAVATI HOSPITAL MEDICAL TIMES

MAY 2023







NABH Accredited Healthcare Provider

Contents

CHAIRPERSON - LHMT

Lt. Gen. (Dr.) V. Ravishankar, VSM

CHIEF EDITOR

Dr. Rajeev Redkar

EDITORIAL TEAM

Dr. Amey Medhekar Dr. Bhavesh Vajifdar Dr. Chandralekha Tampi Dr. D.R.Kulkarni Dr. Kiran Coelho Dr. Leena Jain Dr. Salil Mehta Dr. Sheikh Minhaj Ahmed

CO-ORDINATOR

Mr. Kundan Singh

All the correspondence should be addressed:

To, **The Chief Editor Lilavati Hospital Medical Times Lilavati Hospital & Research Centre A-791, Bandra Reclamation, Bandra (W) Mumbai - 400 050.** Email: medicaltimes@lilavatihospital.com Website: www.lilavatihospital.com

From COO's Desk
Editorial
Overview: Lilavati Hospital and Research Centre 4
 Case Reports. 6 Anaesthetic management in patients with cardiac implantable electronic devices . 6 Lichen planus treated successfully with apremilast – A steroid sparing agent. 9 14 year follow up post bilateral total knee replacement with excellent results . 10 Colorectal cancer and MSI testing . 13 Ewings sarcoma masquerade as an infected axillary cyst . 15 Surgery for the elderly with risks, it is worth the risks . 17
LHMTians Corner
Whats New
List of Publications / Benevolence
Services Available
Straight from the Heart - Patient Testimonials 24
Important Telephone Numbers
Few Honorable Mentions
Feathers in Cap
The Spine Foundation
Inauguration of Cochlear Implant Program 29
Events@ Lilavati
Doctors Associated with Lilavati Hospital

The views expressed in the Medical Times are not of Lilavati Hospital or the editor or publisher. No part of the Medical Times can be reproduced in any form including printing or electronic without the written permission of the chief editor or publisher. The information provided on medicines, materials, investigations, procedures, therapies and anything medical is the sole responsibility of the author of the article and the hospital shall not be responsible for any such information.



From COO's Desk



I am happy to present the first LHMT for the year 2023. The new financial year has begun with renewed hopes and aspirations.

At the outset let me announce that a newly renovated academic hall at 5th floor is now functional and was inaugurated by iconic spiritual guru Sri Sri Ravi Shankar. Gurudeva visited our hospital on 25th Feb 2023 and inaugurated the cochlear implant program run by the ENT department. Pearls of wisdom and encouragement by Gurudeva will go a long way in boosting the morale of all the staff.

We have restarted the academic session's event, wherein interesting medical and surgical cases with trivia are presented by resident doctors from various departments. This academic feast happens on 1st & 3rd Thursday of every month at 8:30 am and invites a healthy academic discussion on diverse clinical

topics. I would like to congratulate Dr Raksha Kulkarni and Dr Darshit Jain from the Department of Nuclear Medicine for their research paper at SNMMI - Society Of Nuclear Medicine & Molecular Imaging (USA) for presentation on June 25th 2023 at Chicago. I would like to congratulate the department of Orthopedics for their publications. I would also like to congratulate Dr Vijay Bang, consultant Cardiologist and President CSI, for publication of his book "The CSI Cardiology Update" and for special award by American Association of Cardiologists of Indian Origin.

Lilavati Hospital has introduced "Vely's latest generation advanced robotic system" for knee joint replacement surgery from 10th Feb 2023. Within a period of 6 weeks we have performed over 30 robotic knee replacement surgeries, all credit goes to the stalwart orthopedic surgeons at Lilavati Hospital. To support the diagnosis and staging of various pulmonary disorders, "FUJIFILM EBUS-Endobronchial Ultrasound System" has been inducted at the Bronchoscopy department. Similarly "CO2 Fractional LASER" for a range of aesthetic treatments has been procured for the Dermo-cosmetology department. Latest "Extracorporeal Shockwave Lithotripter- Compact Sigma", a truly versatile modular lithotripter is now available in Urology OT for precise high end treatment of urinary stones.

Soon CT-Siemens Somatom Drive 256 slice machine will be available. This latest CT scan machine has high end features for whole body computed tomography.

Ketto online ventures conferred LHRC with two awards - "Best Transplant Hospital in India" and "Contribution to Rare Disease Patient Care".

Major Façade repair is underway, an important requirement for structural maintenance of the hospital building. We thank all to bear with us for the inconvenience caused due to the repair work. An X-ray scanner machine has been installed at the main entrance for no touch scanning of visitor's luggage. A beverage dispensing machine has been made available at the main lobby.

Everyone might have noticed the "Guest Relation Coordinators" while entering through the main lobby gate or emergency department. These hard working smart girls are doing a great job of helping the elderly ailing people to reach their desired location. Two OPD coordinators have been appointed to help the consultants and to streamline the OPD patients flow.

Infection In-Control Mela was recently organized by Pathology - Microbiology dept and was appreciated by all for the enthusiasm shown by our staff.

While concluding I would urge you all to continue with the Covid appropriate behaviour and wear a face mask while in the hospital premises.

Lt. Gen. (Dr.) V. Ravishankar

MS, DNB, MCh, FIACS Chief Operating Officer and Consultant Cardiothoracic Surgeon

Editorial



The new financial year has begun with renewed hopes and aspirations for our Lilavati Hospital. At the outset let me announce that a newly renovated academic hall on the 5th floor is now functional and was inaugurated by the iconic Spiritual Guru Sri Sri Ravi Shankar. Gurudeva visited our hospital on 25th Feb 2023 and inaugurated the cochlear implant program run by the ENT department. Pearls of wisdom and encouragement by Gurudeva will go a long way in boosting the morale of all the staff.

Lilavati has restarted the academic session's event, wherein interesting medical and surgical cases with trivia are presented by resident doctors from various departments. This academic feast happens on the 1st & 3rd Thursday of every month at 8:30 am and invites a healthy academic discussion on diverse clinical topics.

The last quarter has witnessed an International publication for the Department of Surgical Gastroenterology by Dr. Gunjan Desai and Dr. Prasad Wagle. We extend our wishes to the team. Ketto online ventures conferred

LHRC with two awards- "Best Transplant Hospital in India" and "Contribution to Rare Disease Patient Care".

Lilavati Hospital has introduced "Vely's latest generation advanced robotic system" for knee joint replacement surgery from 10th Feb 2023. Within a period of 6 weeks we have performed over 30 robotic knee replacement surgeries, all credit goes to the stalwart orthopedic surgeons at Lilavati Hospital.

To support the diagnosis and staging of various pulmonary disorders, "FUJIFILM EBUS- Endobronchial Ultrasound System" has been inducted at the Bronchoscopy department. Similarly "CO2 Fractional LASER" for a range of aesthetic treatments has been procured for the Dermo-cosmetology department. Latest "Extracorporeal Shockwave Lithotripter- Compact Sigma", a truly versatile modular lithotripter is now available in Urology OT for precise high end treatment of urinary stones.

Soon CT-Siemens Somatom Drive 256 slice machine will be available at the Lilavati Hospital. This latest CT scan machine has high end features for whole body computed tomography.

The Histopathology & Cytology department of Lilavati Hospital has launched the much awaited Liquid Based Cytology (LBC), which is an advanced method of screening Gynae (PAP) smears. It enhances the diagnostic accuracy by providing maximum cellular yield against a clear background.

Major Façade repair is underway, an important requirement for structural maintenance of the hospital building. We thank all the staff, patients and relatives who have been bearing with us for the inconvenience caused due to the repair work. An X ray scanner machine has been installed at the main entrance for no touch scanning of visitor's luggage.

One may have noticed the "Guest Relation Coordinators" while entering through the main lobby gate or emergency department. These hard working smart girls are doing a great job of helping the elderly ailing people to reach their desired location. Two OPD coordinators have been appointed to help the consultants and to streamline the OPD patients flow.

Infection In-Control Mela was recently organized on the 5th floor and was appreciated by one and all for the enthusiasm shown by our staff.

While concluding I would urge all of you to please continue with the Covid appropriate behavior and wear a face mask while in the hospital premises. I would appreciate your feedback about the Lilavati Hospital times and would request for an active participation in the publications of case reports or review articles for the same.

Wishing a great future ahead for our Hospital.

Dr. Rajeev Redkar

M.Ch., FRCS (Paed. Surg), MS, DNB, FRCS (Edin), FRCS (Glas), FCPS, IAS Chairman, Indian Association of Pediatric Surgeons (Maharashtra Chapter)



Avail Our Lab Facilities From The Comfort Of Your Home, With Our HOME SAMPLE COLLECTION SERVICE





Time for Call 8am - 6pm

Overview: Lilavati Hospital & Research Centre



Late Shri Kirtilal Mehta



Late Smt. Lilavati K. Mehta

Lilavati Kirtilal Mehta Medical Trust

Lilavati Hospital and Research Centre is run and managed by Public Charitable Trust - Lilavati Kirtilal Mehta Medical Trust which was formed in 1978. The Trust was started by late Shri Kirtilal Manilal Mehta. The Trust is engaged in innumerable charitable endeavors across India.

The Lilavati Kirtilal Mehta Medical Trust is being managed and administered by Board of Trustees:

	Shri Kishor K. Mehta	Shri Rashmi K. Mehta			
	Smt. Sushila V. Mehta	Smt. Charu K. Mehta			
	Shri Nanik Rupani	Shri Dilip Shanghvi			
	Shri Niket V. Mehta	Shri Chetan P. Mehta			
	Shri Bhavin R. Mehta	Shri Nimish H. Sheth			
Shri Ayushman C. Mehta					
Principal Advisor to the Board of Trustees and					
	Lilavati Hospital & Research Centre				
	Shri S. Lakshminarayanan, IAS (Rtd.)				

Lilavati Hospital And Research Centre

Late Shri Vijay Mehta wished to fulfill his parents desire to build a world-class hospital where everyone in need for relief from disease and suffering come in with a certainty to receive the best possible medical care. His passion, attention to details and perseverance resulted in iconic healthcare landmark called **Lilavati Hospital**.

Lilavati Hospital & Research Centre is a premier multispecialty tertiary care hospital located in the heart of Mumbai, close to the domestic and the international airport. It encompasses modern healthcare facilities and state of art technology dedicatedly supported by committed staff.

Lilavati Hospital has focused its operation on providing quality care with a human touch; which truly reflects the essence of its motto, "More than Healthcare, Human Care". Being a centre of medical excellence where technology meets international norms and standard, the hospital has got what it takes to be a pioneering quality healthcare institute that is also one of the most sought after and patient friendly hospital.

Mission: To provide affordable healthcare of international standard with human care **Motto:** More than Healthcare, Human Care



Highlights

- 12 state-of-the-art well equipped operation theatres.
- Full-fledged Liver Transplant, Heart Transplant, Heart Failure, Hypertension, Bariatric, Foot and Ankle, Dental and Dermo Cosmetology Clinic.
- State of art PET SPECT CT department.
- Cerebral Embolic Protection System (CEPS), used for Embolic Protection Device to capture and remove thrombus / debris while performing Transcatheter Aortic Valve Replacement (TAVR) procedure.
- The hospital has installed state-of-art Philips Azurion 7F20 in its cath lab. This is the first of its kind high end configuration system installed in India. The new system enables excellent imaging for Coronary, Cerebro & Peripheral Vascular Diseases.
- The department of Invasive Cardiology has been upgraded with the addition of a High Definition Optis Mobile OCT (Optical Coherence Tomography) system. It has the latest configuration which gives better 3 – Dimensional perspective of Coronary Artery before and after stent deployment.
- The hospital has added Intraoperative Nerve Monitoring system which enables surgeons to identify, confirm and monitor motor nerve function of the patients which helps to reduce the risk of nerve damage during various operative surgeries.
- The hospital has upgraded its ENT department by adding a top-of-the line surgical operating microscope to carry out various microsurgeries under high magnification. The microscope electronics allows the surgeon to electronically control object focusing, magnification, illumination, surgical recording, etc.
- All days round the clock OPD Pathology and Radiology investigations without any Emergency charges.
- More than 300 consultants and manpower of nearly 1,800.
- Hospital attends to more than 10000 In-patient, 40000 Out-patient and performs thousands of surgeries every year.
- Hospital is arm to Robotics for Joint Replacement Surgery
- Auditorium at 5th floor is renovated and functional

Lilavati Kirtilal Mehta Medical Trust Research Centre

The Lilavati Kirtilal Mehta Medical Trust Research Centre is a Scientific and Industrial Research Organization approved by Ministry of Science and Technology (Govt. of India). The Research Centre under guidelines of Dept. of Science & Technology works in close collaboration in evaluating and developing technologies for better healthcare to the sick people. The research centre has undertaken multidisciplinary researches in the fields of Cardiology, Radiology, Cerebrovascular Diseases (Stroke), Ophthalmology, Chest Medicine, Nuclear Medicine, Pathology, Oncology, Orthopedics etc., to cite a few. One of the important aim of the research centre is to establish community based epidemiological researches in cerebrovascular disease in stroke. As a policy, Drug and Device Trials are not undertaken at the Research Centre.

CASE REPORT I:

ANAESTHETIC MANAGEMENT IN PATIENTS WITH CARDIAC IMPLANTABLE ELECTRONIC DEVICES

Dr. Samidha Waradkar Thakur, DA, DNB Anaesthesiology, PGDMLS, Consultant Anaesthesiology **Dr. Abinav Sarvesh S.P.S,** DNB Anaesthesiology Resident

INTRODUCTION

Cardiac Implantable Electronic Devices (CIEDs) are special devices which are implanted in to human body to treat various cardiac rhythm disorders and heart failure. In India, the recent survey shows that about 37,000 cardiac device implantations take place annually [1]. As a result, Anaesthesiologists are now starting to encounter more patients with CIEDs undergoing various surgeries. Hence, it is of paramount importance to know about these devices and its management peri-operatively.



PRE-OPEVALUATION

Any patient with CIED requiring anaesthetic care must undergo a detailed systematic preoperative evaluation [3].

Table 1.0: CIED pre-operative check list summary

- 1. Type of device used PPM, ICD, CRT
- 2. Latest CIED interrogation date 12 months for PPM, 6 months for ICD/CRT
- 3. Manufacturer details known with pacemaker ID card
- 4. Date of insertion of the device
- 5. Battery life of the pacemaker
- 6. Pacing percentages higher percentage indicates higher pacemaker dependency
- 7. ICD number of previous shocks given
- 8. Magnets device compatibility with magnets



Investigations

ECG

- Atrial pacing identified by a spike just before the p wave
- Ventricular pacing identified by a spike just before a broad qrs complex
- If no intrinsic rhythm then patient is pacemaker dependent

Chest radiograph

- Type of CIED used using number of leads seen
- ICDs have thick radio-opaque shock coils

Electrolyte abnormalities and acid base balance

- Hyperkalemia, acidosis/alkalosis increases the depolarization threshold [3]
- Correct electrolyte abnormalities preoperatively

TECHNICAL SUPPORT

Reprogramming of the device and device interrogation is done preoperatively basing on the dependency of patient for the pacemaker and in view of EMI during surgery.

Asynchronous mode delivers a pacing stimulus at a fixed rate set. It prevents EMI being perceived as native rhythm by pacemaker. Suspending anti-tachycardia therapy in ICD prevents unwanted delivery of shocks in response to EMI. Device reprogramming can be done by either medical grade magnets or by maually reprogramming the device by trained personnels.



Image showing sole atrial pacing (Image courtesy - BJA Educ, Volume 16, Issue 11, November 2016, Pages 388–396, https://doi.org/10.1093/bjaed/mkw020)



Image showing sole ventricular pacing (Image courtesy - BJA Educ, Volume 16, Issue 11, November 2016, Pages 388–396, https://doi.org/10.1093/bjaed/mkw020)



Image showing CRT-D device : shock coils (S) are noted with leads in RA, RV and coronary sinus (Image courtesy - BJA Educ, Volume 16, Issue 11, November 2016, Pages 388–396, https://doi.org/10.1093/bjaed/mkw020)



Image showing (a) Dual chamber pacemaker with leads in RA and RV (b) ICD with shock coils (c) CRT with leads in RA, RV, coronary sinus (d) CRT-D three leads with shock coils (Image courtesy - Indian Journal of Anaesthesia 61(9):p 736-743, September 2017)

INTRA-OPMANAGEMENT

- 1. Vigilant monitoring of the patient with respect to the CIED device
- 2. Anticipating and preventing potential CIED dysfunction due to EMI
- 3. Managing intraoperative dysrhythmias.
- 4. All the standard recommended monitors are to be attached including arterial line and cardiac output monitoring.

EMI

Electromagnetic Interferences are defined as interference of pacemaker function by the signals generated from external sources which can be misinterpreted as an intrinsic rhythm and this can cause inhibition of the pulse generation by pacemaker even when the patient needs it. This is called Oversensing [6]. In ICDs oversensing leads to inappropriate antitachycardia therapy such as defibrillation [7]. Common sources of EMI and the precautions to be takes are discussed below.

ELECTROCAUTERY	Current flow interferes with pacemaker function, Management •Use monopolar cautery in short bursts with a pause of 10 seconds. •The pathway from cautery to return electrode should not pass new the GIED and the current field should be at the right angles to pacing leads [8].
EXTERNAL CARDIOVERSION AND DEFIBRILLATION	Large amounts of energy damaging CIED and cardiac tissue are produced Managament. •Place the shock paddles >15 cms from the pulse generator [9] •Delivering current path should be perpendicular to the plane of the pacing system. •Modern CIEDs with voltage regulators such as Zener diodes protect the pacemaker circuitry.
MAGNETIC RESONANCE IMAGING (MRI)	Nower pacemakers are MRI conditional which can be used in certain well defined conditions [10]. Precaution to be taken by checking pacemaker pre and post MRI.

MANAGING INTRA-OPERATIVE ARRHYTHMIAS



POST-OPMANAGEMENT

Apart from regular postoperative management, monitor rate and rhythm continuously and keep all resuscitation equipment ready. The device should be interrogated and reprogrammed to its preoperative settings. Post operative checks may not be needed if EMI was not generated.

CONCLUSION

With increasing number of CIEDs being implanted everyday, the need to understand the management of these devices has become crucial. Good communication between the anaesthetist, CIED team and surgeon is essential. Understanding the basic functioning of CIEDs and making a detailed preoperative plan can help anticipate and avoid most of the complications. Knowledge about managing intraoperative complications such as dysrhythmias is essential. All these combined with a vigilant monitoring even in the postoperative period is the key for a successful outcome.

REFERENCES:

- 1) Shenthar J, Bohra S, Jetley V, Vora A, Lokhandwala Y, et al. A survey of cardiac implantable electronic device implantation in India. Indian Heart J. 2016;68:68–71.
- 2) Giri, Pramila, and Raghavendra Kulkarni. "Longdom Publishing SL | Open Access Journals." Longdom, 25 Nov. 2019, www.longdom.org.
- 3) Bryant, H. C., et al. "Perioperative Management of Patients With Cardiac Implantable Electronic Devices." OUP Academic, 1 Nov. 2016, academic.oup.com/bjaed/article/16/11/388/2445844.
- 4) Salukhe, T. V., et al. "Pacemakers and Defibrillators: Anaesthetic Implications." OUP Academic, 1 July 2004, academic.oup.com/bja/article/93/1/95/265745.
- Chakravarthy, Murali, et al. "Anaesthetic Consideration in Patients With CIED Scheduled for Surgery." PubMed Central (PMC), www.ncbi.nlm.nih.gov/pmc/articles/PMC5613599. Accessed 7 Feb. 2023.
- 6) M.E., Stone, et al. "Perioperative Management of Patients With CIED PubMed." PubMed, 1 Dec. 2011, pubmed.ncbi.nlm.nih.gov/22156267.
- Casavant D, Haffajee C, Stevens S, Pacetti P. Aborted implantable cardioverter defibrillator shock during facial electrosurgery. Pacing Clinical Electrophysiology 1998;21:1325-6.
- 8) Abdelmalak, Basem, et al. "Electromagnetic Interference in a Cardiac Pacemaker During Cauterization With the Coagulating, Not Cutting Mode." PubMed Central (PMC), www.ncbi.nlm.nih.gov/pmc/articles/PMC3214561. Accessed 7 Feb. 2023.
- 9) Erdogan, Okan. "Electromagnetic Interference on Pacemakers." PubMed Central (PMC), 1 July 2002, www.ncbi.nlm.nih.gov/pmc/articles/PMC1564060.
- 10) Ferreira, António M., et al. "MRI-conditional Pacemakers: Current Perspectives." PubMed Central (PMC), 7 May 2014, www.ncbi.nlm.nih.gov/pmc/articles/PMC4019608.



CASE REPORT II

LICHEN PLANUS TREATED SUCCESSFULLY WITH APREMILAST – A STEROID SPARING AGENT

Dr S G Parasramani and Dr Delanthimar Joshika Bhandary Dermocosmetology Laser center.

INTRODUCTION:

Lichen planus is a chronic idiopathic inflammatory dermatosis that affects skin, its appendages and mucous membranes. Pruritic violaceous flat topped papules coalescing to form plaques are characteristically seen on the skin. Steroids form the mainstay of treatment in extensive, debilitating forms of LP. We hereby present a case of lichen planus treated with a steroid sparing agent, Apremilast.

Case description:

A 46 year woman presented with itchy dark lesions on the limbs and abdomen since four months. She had no systemic comorbidities. On examination, multiple violaceous to hyperpigmented keratotic papules were noted on the upper and lower limbs and lower trunk. Scalp, mucosa, palms and soles were spared. Vitals were within normal limits and systemic examination was normal.

Histopathological examination of skin sample showed hyperkeratosis, wedge-shaped hypergranulosis, irregular acanthosis, necrotic keratinocyte (Civatte body), dense band-like lymphocytic infiltration in the papillary

dermis, and vacuolar alteration of the basal layer. (Fig 1)

Baseline tests such as complete blood count, serum creatinine, liver function tests were normal, while triple H was negative. Patient was started on topical steroids and systemic Apremilast. Patient was followed up regularly. The lesions healed with post inflammatory hyperpigmentation. (Fig 2 and 3)

DISCUSSION:

LP can be diagnosed easily on the skin surface by its typical morphology and characteristic Wickham striae seen on magnification. Classic LP lesions commonly present with the 6 P's : Pruritus, Purple, Polygonal, Planar, Papules, and Plaques.⁽¹⁾ Many variants in morphology and location also exist, including oral, nail, linear, annular, atrophic, hypertrophic, inverse, eruptive, bullous, ulcerative, lichen planus pigmentosus, lichen planopilaris, vulvovaginal, actinic, lichen planus-lupus erythematosus overlap syndrome, and lichen planus pemphigoides.⁽²⁾ Histopathology of the lesion is essential for definitive diagnosis of LP with basal epidermal keratinocyte damage and lichenoid-interface lymphocytic reaction.



Figure 1 H & E stain 40X magnification.



Apremilast is a newly developed oral phosphodiesterase 4 (PDE4) inhibitor. It is FDA approved for use in psoriatic arthritis and plaque psoriasis.⁽³⁾ Its use in LP is off label. It binds to toll-like receptor TLR4 in macrophages, which decrease production of pro-inflammatory cytokines.^(4,5) It is safe, requires no monitoring and can be a good alternative to steroids when used for prolonged periods in steroid-responsive chronic inflammatory dermatosis as evidenced by long term follow up of our patient.

REFERENCES:

- 1. V. Kumar, A. Abbas, and J. Aster, Robbins & Cotran Pathologic Basis of Disease, Saunders, Philadelphia, Pa, USA, 8th ed edition, 2009.
- Weston G, Payette M. Update on lichen planus and its clinical variants. Int J Womens Dermatol. 2015 Sep 16;1(3):140-149. doi: 10.1016/j.ijwd.2015.04.001. PMID: 28491978; PMCID: PMC5418875.
- 3. Apremilast (OTEZLA). National Drug Monograph. 2015. Available on https://www.pbm.va.gov/clinicalguidance/drugmonographs/Apremilast_OTEZLA_Monograph.pdf.
- 4. Cauli A, Porru G, Piga M, Vacca A, Dessole G, Mathieu A. Clinical potential of apremilast in the treatment of psoriatic arthritis. ImmunoTargets and Therapy. 2014;3:91.
- 5. Bisondi P, Girolomoni G. Apremilast in the therapy of moderate-to-severe chronic plaque psoriasis. Drug Design, Development and Therapy. 2016;10:1763-70.

CASE REPORT III

14 YEAR FOLLOW UP POST BILATERAL TOTAL KNEE REPLACEMENT WITH EXCELLENT RESULTS

Dr. Suraj Gurav, Consultant, Dept. of Orthopaedics.

INTRODUCTION

We present a 14 year follow up of an 82 year old female operated (at age 68) with a cruciate retaining total knee arthroplasty of both the knees.

The patient presented with bilateral osteoarthritis of knee with varus and flexion deformity, complaining of pain affecting activities of daily living. The patient was known case of Diabetes Mellitus. A decision was taken to undergo total knee arthroplasty for both knees and both were operated 2 months apart.

Course in Hospital:

Patient was mobilised immediately on the day of surgery with full weight bearing walking, static quadricep exercises and ankle pumps. Knee range of motion exercises were started on post operative day 1. The early post operative period was uneventful, no blood transfusion was required post operatively for either surgery, check dress was clean and wound healing was as expected.

Outcome:

Functional outcome was assessed using the Oxford Knee Score. Patient had a score of 12/48 pre-operatively. Early post operative score was 46/48 At 2 years post operatively patient was comfortable, able to perform daily activities with an Oxford Score of - 46/48 Patient was lost to follow up after that and has now presented, 12 years after the last visit. At present, patient is asymptomatic . OKS is 46/48.



Post operative X rays(top left clockwise): AP, Skyline, Left Lateral, Right Lateral Views.



11

Plain short leg radiographs of the knee in AP and Lateral views show the following:

The position of the components is good with no marked radiolucency around the prosthesis, with a tibial score of 2. The patella placement is ideal in the femoral notch.

The alignment as seen in clinical photographs appears neutral. Patient is mobilising well without pain.



Clinical photographs showing alignment, knee bending and straight leg raisin

DISCUSSION

PCL retaining prosthesis is considered to have better proprioception, reproducing physiologic knee biomechanics, and restoring femoral rollback because of the preservation of the native PCL (1). The increased roll back is also said to increase the quadriceps lever arm and the power of extension. Studies comparing PCL retaining vs PCL sacrificing total knee arthroplasty have been inconclusive with neither proving to be superior to the other.

CONCLUSION

This single author, single patient case report was an opportunity to showcase the long term findings of a PCL retaining total knee replacement. Long term survivorship of a PCL retaining TKR is satisfactory with good patient outcomes(2).

REFERENCES:

- 1. Nawabi, D.H., Abbasian, A. and Briggs, T.W. (2014) "Posterior cruciate ligament-retaining total knee arthroplasty," European Surgical Orthopaedics and Traumatology, pp. 3179–3200.
- 2. Abdel, M.P. et al. (2011) "Increased long-term survival of posterior cruciate-retaining versus posterior cruciate-stabilizing total knee replacements," Journal of Bone and Joint Surgery, 93(22), pp. 2072–2078.
- 3. Vertullo, C.J. et al. (2017) "The effect on long-term survivorship of surgeon preference for posterior-stabilized or minimally stabilized total knee replacement," Journal of Bone and Joint Surgery, 99(13), pp. 1129–1139. Available at: https://doi.org/10.2106/jbjs.16.01083.

NEUROINTERVENTIONAL RADIOLOGY



- Intracranial Aneurysms
- Arteriovenous Malformations
- Cranial, Skull Base & Spinal Arteriovenous Fistulas
- Acute Stroke / Venous Stroke
- Carotid, Vertebral & Intracranial Atherosclerotic Disease



CASE REPORT IV:

COLORECTAL CANCER AND MSI TESTING

Dr. Megha Kasture, MUHS Fellow in GI HPB, Department of Histopathology **Dr. Chandralekha Tampi,** Consultant, Department of Histopathology

INTRODUCTION

Colorectal cancer (CRC) is the third most prevalent cancer in humans and the third most common cause of cancer related deaths in both males and females, worldwide.(1) Microsatellite instability (MSI) is the underlying defect in 15% of colorectal cancers and detection of MSI has prognostic & therapeutic significance. Though the majority of MSI cancers occur sporadically, about 3 % of them are familial, and are known as Lynch syndrome.

MSI in a carcinoma can be detected reliably by IHC testing for expression of four proteins, MLH1, PMS2, MSH2 & MSH6.(3) We present three cases of Colorectal cancer thus detected to have Microsatellite instability.

Case 1: A 63 years old male came with the complaints of blood in stools on & off for 1 month. On colonoscopy, a proliferative lesion with stricture was noted in ascending colon, diagnosed as moderately differentiated adenocarcinoma on biopsy. He underwent extended right hemicolectomy. The MSI studies, by IHC revealed loss of MLH1 and PMS2 protein expression, in the tumour (Fig 1).

Case 2: A 37 years old female was complaining of bleeding per rectum since past 2 months. On evaluation with colonoscopy and biopsy, was diagnosed with Synchronous carcinomas (Adenocarcinoma) in Sigmoid colon and rectum. Her MSI studies showed loss of MSH6 protein expression in the tumour. Her father had Carcinoma colon at the age of 50 years. The patient received neoadjuvant CTRT and underwent total proctocolectomy.

Case 3: A 62 years female, known case of synchronous uterine and right ovarian endometrioid Adenocarcinoma, post chemotherapy status, came with the complaints of generalised weakness. Her colonoscopy revealed tumour infiltration at hepatic flexure with luminal compromise and biopsy revealed Adenocarcinoma. She underwent right hemicolectomy. Her MSI studies displayed loss of MLH1 and PMS2 protein expression in the tumour.

DISCUSSION:

The mismatch repair (MMR) proteins (viz MLH1, PMS2, MSH2, MSH6) are ubiquitously expressed proteins involved in the repair of DNA defects occurring during cell replication. MMR proteins detect and repair these defects, thus ensuring healthy tissue. For this, MSH2 forms a complex with its binding partner MSH6, which recognizes the DNA mismatch while MLH1 with its binding partner PMS2, forms a complex, which brings about the excision, repolymerization and ligation of the repaired DNA strand.(2)

When there is defect in these MMR proteins itself, a large number of replicated defective cells go unrepaired, and it leads to dramatic increase in rate of abnormalities, some of which are oncogenic. These mutations involve the microsatellites in the DNA structure leading to the term Microsatellite instability for these tumours.

Microsatellite instability is seen in approximately 15% of all colorectal cancers. It is characterised by genetic or epigenetic defects in one of the DNA mismatch repair (MMR) proteins.

Immunohistochemical (IHC) testing is easily performed using antibodies to proteins MLH1, PMS2, MSH2, MSH6. Defects in any of these proteins results in loss of their nuclear expression on IHC testing. If MLH1 is mutated and lost from the DNA then its binding partner PMS2 will also be absent from the repair protein complex. Therefore, loss of expression of MLH1 protein will always be accompanied by loss of PMS2 expression. The same holds true for MSH2 and its binding partner MSH6. In contrast, the mutations in PMS2 or MSH6 are usually associated with the loss of the respective protein alone.(2)

Interpretation of DNA Mismatch Repair IHC					
MLH1	PMS2	MSH2	MSH6	Interpretation	
+	+	+	+	Intact DNA mismatch repair	
-	-	+	+	Suggestive of MSI. MLH1 loss can be in the gene or epigenetic. BRAF mutation testing or	
				methylation assay are helpful for this	
+	+	-	-	Suggestive of MSI	
+	-	+	+	Suggestive of MSI	
+	+	+	-	Suggestive of MSI	

MSI tumours are often high in T stage, but relatively less prone to metastasis.



Figure 1: IHC interpretation - The DNA MMR protein expression is interpreted as nuclear positivity in crypt epithelium and the lymphocytes, serves as internal positive control.

The loss of MMR proteins expression, by IHC denotes presence of microsatellite instability.(2)

If the patient is suspected to have a familial carcinoma (Lynch syndrome), testing for the defective gene (representing the absent protein as detected by the IHC testing) can be done and further surveillance of the patient and family members can be done. MSI tumours are consistently associated with comparatively favourable prognosis. MSI-H (high frequency) is one of the potential predictors of efficacy of chemotherapy.(1) The effectiveness of PD-1 inhibitors is better on MSI tumours. This is thought to be related to the gradual accumulation of the additional mutations present, which elicits additional host response.(4)

CONCLUSION:

Detection of MSI in colorectal carcinoma has prognostic and therapeutic implications and can be reliably detected by IHC testing on the tumour tissue.

REFERENCES:

- 1. Nojadeh JN, Sharif SB, Sakhinia E. Microsatellite instability in colorectal cancer. Excli Journal. 2018;17:159-168-ISSN 1611-2156.
- 2. Odze, R.D. (2015) Odze and Goldblum's surgical pathology of the GI tract, liver, biliary tract and pancreas. Elsevier.
- 3. Geiersbach KB, Samowitz WS. Microsatellite Instability and Colorectal Cancer. Arch Pathol Lab Med. 2011;135:1269–77.
- 4. Li K, Luo H, Huang L, Luo H, Zhu X. Microsatellite instability: A review of what the oncologist should know. Cancer Cell International. 2020;20(1).



CASE REPORT V:

EWINGS SARCOMA MASQUERADE AS AN INFECTED AXILLARY CYST

Dr Rahul Deo Sharma Dr Sushma A Dr Surrendra Singh Dr Sonia Thakur Dr Anant Bangar

INTRODUCTION

Extraskeletal Ewing sarcoma (EES) is a rare entity that belongs to the ES family of tumors (ESFT), which is a group of small round tumor cells that share a common neural histology and genetic mechanism (1). In addition to EES, ESFT includes the classical Ewing sarcoma of bone (ESB), which is the second most common primary bone malignancy in the pediatric population, peripheral primitive neuroectodermal tumor (pPNET) and Askin tumor of the chest wall, which is a subtype of PNET (2). EES was first discovered in 1969 (3), but it remains an elusive pathology in the literature

The incidence of EES is 0.4 per million, which is 10 times less than that of ESB (1). Its prevalence follows a bimodal distribution, peaking in those who are <5 years and >35 years.

EES is a rapidly growing mass that causes localized pain (4). It develops within the soft tissues of any anatomic region, but the most common sites include the upper thigh, buttocks, upper arm and shoulders (4). Conversely, metastases are commonly observed in the lungs, bones and bone marrow(5). Thus, the symptoms of EES depend on its primary site, as well as the site of metastases, which are found in 25% of all cases at presentation.

Here, we are presenting an unusual presentation of extraskeletal Ewing sarcoma as a sebaceous cyst.

Case Report

A 10 year old male child presented with Swelling over the right axilla for 3 month, gradually increasing in size. On and off pain along with fever and redness. No history of cough, cold, trauma, weight loss.

On examination there was a 5x5 cm firm to cystic swelling in the right axilla (in the dermal plane) with prominent veins and tenderness (fig 1).

Other systemic examination findings were within normal limits.

Blood investigation done suggestive of Hb -12.2 gm/dl, TLC -10220, Platelet -3.54lakh, Serum creatinine -0.38.Ultra sonography of local part suggests ovoid hypoechoic cystic lesion measuring 2.6x2.5x1.5 cm in the cutaneous and superficial subcutaneous plane of right axilla. Complete excision of infected swelling of the right axilla was done and specimen sent for histopathological examination.

Histopathology report revealed the diagnosis of malignant Small Round Cell Tumor- Ewing's sarcoma with CD 99, Vimentin, Cytokine d1 positive.

After histopathological diagnosis, the patient was evaluated further and PET scan was done which showed no active disease at the operative site. The low to moderate grade activity in minimally enlarged neck nodes favour reactive nodes.

Patient was then planned for another surgery for wide local excision and the tissue was sent for histopathological examination which showed no residual viable tumor.



Patient was started on chemotherapy and 17 cycles of vincristine and doxorubicin based chemotherapy has been given followed by 25 cycles of 45Gy radiation therapy.

Patient is currently asymptomatic with 1 year follow up.

DISCUSSION

The extra osseous Ewing's sarcoma (EOES) is a malignant tumor of soft mesenchymal tissue that usually affects the lower extremities and the paravertebral region. This tumor has a very low incidence and represents approximately 1.1% of malignant soft tissue tumors. In agreement with this case, the age range of appearance of this tumor is between 5-25 years in any of its locations. Ewing's sarcoma is more prevalent in male than in females when all locations of the tumor are considered.

The exact etiology of this tumor remains unknown, however it is currently described histologically as a tumor of neuroectodermal origin[6]. Hematoxylin-eosin staining (H & E) reveals an intense blue color that defines the Ewing's sarcoma (ES) as belonging to the group of blue round cell tumors. Therefore, immunohistochemistry is an essential study for the differential diagnosis of this entity; in this case, the marker CD99 / MIC2, identified by antibody 013, was found positive, this marker is a cell membrane glycoprotein found in all ES and PNET, being reported in 98% of the cases [7].

The CD99/MIC-2 marker has also been detected in other blue round cell tumors such as lymphoblastic lymphoma, rhabdomyosarcoma, small cell carcinoma and poorly differentiated synovial sarcoma [6], but in this case the possibility of another blue round cell tumor can be ruled out, due to the immunoreactive negativity to markers like leukocyte common antigen (CD45 / LCA), desmin and broad spectrum cytokeratin. Other immunohistochemical markers found to be negative were the epithelial membrane antigen (EMA), CD20 / L26, CD45-RO / UCHL-1 and terminal deoxynucleotidyl transferase (TDT).

The current treatment recommendation by the National Comprehensive Cancer Network (NCCN) is local treatment (surgery and/or radiotherapy) plus chemotherapy

The current regimens include alternating vincristine, doxorubicin, cyclophosphamide and ifosfamide, etoposide cycles every 3 weeks

The prognosis of EES is more favorable compared with the skeletal subtype, although factors affecting prognosis seem to be similar in both subtypes ,Notably, the 5 year overall survival rate is superior for localized EES compared with localized skeletal Ewing's sarcoma. A study showed that the strongest predictor of favorable OS was age <14 years at diagnosis (8). The COG recently reported that patients with extra skeletal primary tumors were more likely to have an axial primary site, less likely to have large primary tumors, and had a statistically significantly better prognosis than did patients with skeletal primary tumors [9]. Relapse rates are as high as 30% in some series and most patients will not survive despite attempts of salvage chemotherapy. Tumor size over 8 cm, metastatic disease at diagnosis and relapsed disease have the worst outcomes.

CONCLUSION

Our case of Extraskeletal Ewing's sarcoma masquerading as Axillary Sebaceous Cyst underscores the importance of histopathological examination of every excised lesion.

REFERENCES:

- 1. Van den Berg H, Heinen RC, van der Pal HJ and Merks JH: Extra osseous Ewing sarcoma. Pediatr Hematol Oncol 26: 175 185, 2009.
- 2. Iwamoto Y: Diagnosis and treatment of Ewing's sarcoma. Jpn J Clin Oncol 37: 79 89, 2007.
- 3. Tefft M, Vawter GF and Mitus A: Paravertebral 'round cell' tumors in children. Radiology 92: 1501 1509, 1969.
- 4. Goldblum J, Folpe A and Weiss S: Enzinger and weiss's soft tissue tumors. 6th edition. Elsevier Health Sciences, 2014.
- 5. Primitive neuroectodermal tumors. Pediatr Clin North Am 44: 20.991 1004, 1997.
- 6. Margaix-Muñoz M, BagÃ; n J, Poveda-Roda R. Ewing sarcoma of the oral cavity. A review. J Clin Exp Dent. 2017;9(2):e294-e301.
- Galyfos G, Karantzikos GA, Kavouras N, Sianou A, Palogos K, Filis K. Extraosseous Ewing sarcoma: diagnosis, prognosis and optimal management. Indian J Surg. 2016;78(1):49-53.
- Krasin M.J., Rodriguez-Galindo C., Billups C.A., Davidoff A.M., Neel M.D., Merchant T.E. Definitive irradiation in multidisciplinary management of localized Ewing sarcoma family of tumors in pediatric patients: Outcome and prognostic factors. Int. J. Radiat. Oncol. Biol. Phys. 2004;60:830–838.
- 9. Cash T., McIlvaine E., Krailo M.D., Lessnick S.L., Lawlor E.R., Laack N. Comparison of clinical features and outcomes in patients with extraskeletal versus skeletal localized Ewing sarcoma: A report from the Children's Oncology Group. Pediatr. Blood Cancer. 2016;63:1771–1779



CASE REPORT VI:

SURGERY FOR THE ELDERLY WITH RISKS, IT IS WORTH THE RISKS!!

Dr Shashank Shah, MS, FAIS, FICS, HON FIAGES, HON FALS, HON FMBS, Dip Lap Surgery, France, Visiting Prof IRCAD

INTRODUCTION

Severe obesity, earlier known as morbid obesity is increasing in prevalence, amongst all age groups.

Severe obesity affects quality of life of these people and it can make elderly people dependent and non-ambulatory. Most of the associated comorbidities of obesity like IHD, severe sleep apnea, diabetes , non ambulatory status are risk factors for anesthesia and surgery and at the same time the indication for surgery. This may create a dilemma in clinicians thought process.

We present a case from Lilavati hospital, who had a remarkable transformation in her quality of life after bariatric surgery.

Case Capsule :

67 yr old lady with severe obesity (super morbid obesity), BMI 58kg/m2 presented with breathlessness, orthopnoea, anasarca, uncontrolled diabetes and hypertension with severe osteoarthritis of knees with pain. She presented in the out patient on a wheelchair with SpO2 of 85%.









Pre-operative preparation:

She was prepared with very low calorie diet, pulmonary physiotherapy, GLP1 receptor analogues and lost 5kg and was able to take a few steps. her spo2 improved to 90% and she was then evaluated and planned for bariatric surgery.

She underwent laparoscopic sleeve gastrectomy in an hour of anesthesia and was extubated on table with the best efforts from the skilled anesthesia team at Lilavati hospital. She was in ICU for a day, fully propped up in view of orthopnea, with a nasal airway. She was ambulated in 5 hours after surgery and discharged after two days only.

RESULTS:

In one year, she lost 31kg; knee pain, diabetes resolved completely and she was ambulatory and independent. Her sleep apnea reversed and she could sleep in her bed comfortably.

She celebrated when her dream could come true by climbing to the Jagannathpuri Temple on her own, a real satisfactory improvement in quality of life for her. Her surgery was covered under cashless insurance.

Morbid obesity is a disease and hence bariatric surgery is now covered under insurance.

Insurance cover for bariatric surgery is accepted for the following indications:

1.BMI>40

Or

2. BMI >35 with uncontrolled diabetes or severe sleep apnea or coronary heart disease.

REFERENCES:

- 1. Bariatric surgery in older adults Should there be an age limit? Sergio Susmallian, MD, Asnat Raziel, MD, Royi Barnea, PhD, and Haim Paran, MD
- 2. Manton KG. Changing concepts of morbidity and mortality in the elderly population. Milbank Mem Fund Q Health Soc 1982;60:183–244.



LHMTians CORNER

Musings of a histopathologist on a sunday afternoon

Dr. Chandralekha Tampi, Consultant, Department of Histopathology

I am Sanjaya.

It is I, who has been given that miraculous power to see that battle raging beyond, and recount it without fear or favour.

Like Sanjaya, I see and report that strife, that' story of suffering in living tissue' which I alone can see and interpret for a sightless multitude.

I can see the result of the sudden blow, small capillaries dilated in shock, RBCs falling onto pristine stroma... to be cleaned up on another day.

I have also seen another slower battle creeping quietly and effectively, like Shalya on Karna, with insidious inflammation & fibrosis, till one day even the vital energies are sapped.

I have seen immune cells, all up in arms and swirling in a flurry, encircling and converting to slipper shapes and foamy cytoplasm, immolating themselves in a cheesy death, to contain lipid coated bacteria.. that was a battle of heroic proportions !

I have seen neutrophils, like armies of foot soldiers, throwing themselves onto firewalls of destruction, that finally quell invading hordes, and then their heroic little bodies, thrown out.. like so much waste !

I have seen the shock of radiation that throws chromatin into smudgy molasses, and balloons up organelles till the cell is fat, immobile and castrated.

And also known how poisonous fumes thrown relentlessly, from without, till in confusion, loyal clansmen, forget their path, and meander like madmen back into childishness & infancy, and one knows not who they are, until in brief periods of lucidity, they weave a gland or a keratin pearl, short memories of who they once were. They are then heartlessly cut off, or poisoned to death, forgetting that once, they too were obedience personified.

Some like those frequent demons of mythology, who given a boon of immortality forget all else, and outgrow themselves, at the cost of all that is decent, spewing out venom & mucus, spelling a death knell to all around,

till an Avenger of epic proportions steps forth with blade, to battle, and restore balance. Tell the tale kindly, O'Sanjaya.. report and record, without favour or rancour; as a true Balladeer of War; for this is truly a battle of epic proportions, which only you have been given the power to see.

Treat the story gently as you sign it out, for remember yours is the memorial of that war

Reprinted with permission from the Editor - The Indian Journal of Pathology & Microbiology. Citation Tampi C. Musings of a histopathologist on a sunday afternoon. Indian J. Pathol Microbiol 2022:961-2.

What's New

Latest Generation Advanced Robotics System For Knee Joint Replacement

Lilavati Hospital has introduced Vely's latest generation advanced robotic system for knee joint replacement surgery from 10th Feb 2023. This marks the most progressive development in KNEE REPLACEMENT SURGERY by our stalwart surgeons for unmatched precision and accuracy to achieve the best possible results. Till now we have performed over 30 robotic knee replacement surgeries. The main advantages are faster and better recovery, decreased pain, customization, eliminates significant radiation exposure and reduction in procedure time.



What's New in Cytology

Histopathology & Cytology department of Lilavati Hospital has launched the much awaited Liquid Based Cytology (LBC), which is an advanced method of screening Gynae (PAP) smears.By providing maximum cellular yield against a clear background, it enhances the diagnostic accuracy.

The LBC smears give better cellular morphology, thus detection of infectious pathology and low grade lesions is better, with a higher sensitivity rate. It also reduces the likelihood of false negative results.

An additional advantage is, the same sample with the preservative solution, can be used for molecular tests like HPV DNA testing (hence repeat sampling of the patient can be avoided).



We have recently installed Chapati making machine in our kitchen located on 4th floor which makes Indian traditional Style Chapatis in the most hygienic manner. Dough just needs to be fed into the hopper and at the outlet you get Fresh Piping Hot Chapatis. Apart from this no oil is required for the preparation of chapatis. Thus the introduced chapati making machine is economical & offer oil free Healthy Chapatis.





Extracorporeal Shockwave Lithotripter (ESWL) Compact Sigma

The compact sigma is truly versatile modular lithotripter Isocentric- Designed for precision & flexibility

Flexible shockwave- promotes patient comfort Laser guided alignment Stable mechanical coupling Ultrasound freedom



Food Vending Machine installed at Ground Floor Lobby Level – Operational 24X7 offers you with the various readymade snacks items, beverages, biscuits & fruit juices to Cater various people visiting to our Hospital.



FUJIFILM EBUS (Endobronchial Ultrasound System)

Endobronchial ultrasound bronchoscope is designed to support diagnosis and staging especially for lung cancers. It has enhanced distal angulation and a slim design.Optimal orientation is provided by the large 120° field of view and 10° forward oblique view. The Fujifilm high-resolution Super CCD imaging provides excellent endoscopic image quality.The convex ultrasound delivers reliable ultrasound images, while the optimized needle guide of the EB-530US facilitates safe TBNA (transbronchial needle aspiration) procedures and precise puncture action.



List of Publications (National)

S. No.	Author	Title of the Paper / Chapter	Month of Publication
1	Dr, Rajesh N. Maniar	Forgotten Joint Score Post Total Knee	Indian Journal of Orthopaedics
	Dr. Ankur Dhiman	Arthroplasty and Its Correlation with	https://doi.org/10.1007/s43465-
	Dr Parul R. Maniar	the New Knee Society Score	021-00452-z
	Dr Pranav Bindal		
	Mr.Anil Arekar		

Benevolence

22

The social service wing of the hospital - SEWA serves to the health requirements of needy people. This department seeks to bridge the gap between the needy patients and the fast evolving medical technology.

Under this service Lilavati Hospital and Research Centre offers

- -Assistance to indigent and weaker section patients after due scrutiny.
- Help poor patients who don't fall in the above category for crowd funding and financial help.
- Conduct various free medical camps for socially deprived regions.



Services Available

- Inpatient Services
- Outpatient Services
- Critical Care
 - Intensive Care Unit (ICU)
 - Intensive Cardiac Care Unit (ICCU)
 - Surgical Intensive Care Unit (SICU)
- Pediatric Intensive Care Unit (PICU)
- Neo-natal Intensive Care Unit (NICU)
- Paralysis & Stroke Unit
- Audiology & Speech Therapy
- Bariatric Surgery
- Cardiology & Cardio-vascular Thoracic Surgery
- Chest Medicine & Sleep Study
- Chronic Pain Management
- Colorectal Surgery
- Dental
- Dermatology & Hair Transplant
- Diabetology & Endocrinology
- Diabetology & Diabetic Foot Surgery
- ENT, Head & Neck Surgery
- Endocrinology & Endocrinal Surgery
- Gynecology & Obstetrics
- GI & Liver Transplant
- General Surgery
- IVF
- Internal Medicine & Infectious Disease Specialty
- Minimal Access Surgery

- Nephrology & Dialysis
- Neurology & Neuro Surgery
- Oncology & Onco-Surgery
- Ophthalmology & Corneal Transplant
- Orthopedic, Spine Surgery & Joint Replacement
- Psychiatry & Psychology
- Pediatrics & Pediatric Surgery
- Plastic Surgery / Cosmetic Surgery
- Physiotherapy
- Rheumatology
- Reconstructive (Plastic) Surgery
- Robotic Joint Replacement Surgery
- Urology & Kidney Transplant
- Vascular & Endovascular Surgery
- Imaging Services
- X-ray
- Sonography (USG)
- CT
- MRI
- Nuclear Medicine
- PET CT
- Laboratory Services
 - Pathology
 - Molecular Pathology
 - Microbiology & Serology
 - Histopathology
 - Blood Center & Transfusion Services
- Free OPD



Straight from the Heart - Patient Testimonials



Staff friendliness & courtesy knowledgeable doctors promptness in service.

Satyendra Misra

The discipline maintained by the doctors & the treatment done by doctors and nurse is commendable.

Kamladevi Jain

Excellent panel of doctors very supportive nursing staff keeping me informed about my treatment at all stages

Swarupa Jain

Impressed with the number of staff in each dept. service of entire staff from reception nurses to ward boy.

Inderjeet Oberoi

The organizational culture is great patient & patient families receive great care. very warm & cordial staff.

Pramod Deshmukh

Very well organised doctors and nursing staff excellent security staff.

Vishweshwar Rambhare

Over all team management in every facility, doctors nurses, security staffs all are very good at their efforts.

Mairaj Sayed

Meera Sahani

Being part of this hospital from last 3years everything has always being good smooth service.

Savita Jain

I am regular customer here and have always felt like second home. Thanks to all the doctors and staff.



Arron Willams

The treatment given here is very effective.

Ambika Tiwari

Nice hospitality, polite staffs.



Preksha Bhatt

They guided us to every department and every doctors consulte very politely.

Rajeev Jain

Staffs were cordial and extured excellent courtesy well behaved.



Rufin Dias

The way it has been managed and organised good staff.

0

When a mundane life gets ruptured. When a catastrophe befalls on you and u look around what has hit you. Shattered endeavored to amass the wits and contemplate what next. My wife got diagnosed with a bronchogenic cyst in a different city far away from Mumbai. Did my research which Center and importantly which medico to perform the surgery. Our country has plethora of great CT Surgeons but Zeroed in for Dr Amol Bhanushali for one paramount reason for his excellent track record of forfending lung. Such surgery are mostly conducted through lobectomy where part of lung is sacrificed to abstract the cyst. Having auricularly discerned of his VATS expertise decided to go with him. He performed the arduous five hour surgery at Lilavati hospital and the cyst of the size of tennis ball was abstracted through his minimum invasive surgery bulwarking the whole lung. Patient is back to normal life. Thanks Dr Amol for preserving a life. Not only he is a great surgeon he is a great human being: Spends time with the patient afore and after surgery. Accessible and amiable disposition his smile will abate ur apprehensiveness and put you at ease. He is bestowed with great dexterity in his own field and looks God has engendered a right guy to preserve human lives.



Important Telephone Numbers

Toll Free	18002678612
New Boardline	+91 22 6931 8000 / +91 22 6930 1000
	+91 22 5059 8000 / +91 22 5059 1000
Emergency / Casualty	8063 / 8064 / +91 86579 07754
Ambulance	+91 97692 50010
TPA Fax	+91 22 2640 5119
Appointments for OPD Consultants	86579 07751 / 52 / 53
Extensions A device Department	0000 / 0001 / 0002
Admission Department	8080 / 8081 / 8082
AKD Counter Dilling Langefiert	8050 / 8051
Billing - Inpatient	1580
Billing - OPD	8052
Blood Bank	8215
Blood Bank Medical Social Worker	8214
Cardiology	8236
Cath Lab	8137
Chemist	1579 / 1578
CT Scan Department	8044
Dental	8028
Dermatology / Hydrotherapy	8021
EMG / EEG	8249
Endoscopy	8057
ENT / Audiometry	8232
Health Check-up Department	+91 86578 96447
Home Sample Collection (9am - 5pm, Mon to Sat)	+91 88796 77193 / 196
IVF	8226
Medical Social Worker (SEWA)	8361
MRD	8358 / 8359
MRI Department	8066
Nuclear Medicine / PET & SPECT CT	8092
Ophthalmology	8229
Physiotherapy	1536
Report Dispatch Counter	1620
Sample Collection Room	8028
TPA Cell	8089
Transplant Co-ordinator	8362
Urodynamics	8032
Visa Section	Direct No.: 86579 07756 (12-4 pm Mon to Sat)
	8248 / 8244
X-Ray, Sonography Department	8030 / 8038

Few Honorable Mentions



Under his FOGSI presidential theme "Swasth Nari, Sukhi Nari"/"Healthy Woman, Happy Woman", **Dr. Hrishikesh Pai** successfully completed the epic Nari SwasthyaJanandolan Yatra and the Na Na Anaemia Bus Ride which was started in Rishikesh on 28th November and covered over 4000 km in 21 cities over 40 days. The Yatra involved health camps, free blood tests and public forums in all these cities.







The CSI Cardiology Update Book 2022. 1600 pages / 2 volumes / full text book covering bedside clinical, general cardiology, non-invasive & interventional cardiology (coronary & structural both)

Editor in chief: Prof Dr Vijay Bang



Feathers in Cap

Lilavati Hospital has been awarded by ketto online venture (crowd funding platform)



Contributions to Rare Disease Patient Care 2022-2023



Best Transplant Hospital in India 2022-2023



Lilavati Hospital and Research Centre has secured top rankings in all India Multispeciality Hospitals Ranking Survey 2023, published by Times of India

The Spine Foundation at Lilavati



Lilavati Hospital is proud to have the country's best consultants on our panel. A case in point is our spine unit which includes some of the best and most experienced spine surgeons across the country. This is headed by Dr Shekhar Bhojraj, the country's first specialised dedicated spine surgeon. While these doctors treat the who's who in politics, cinema and sports, they don another avatar during the weekends. You will find them at places where even tarred roads and electricity are a luxury. Under the umbrella of The Spine Foundation, these doctors provide free treatment and surgery to the poor. The Spine Foundation aims to provide high-quality care to patients with spinal pathologies but with limited resources. The foundation provides for their investigations, treatment, admissions, surgery, rehabilitation and ultimate placement back into society so they can be productive members again. Over the years, the expertise of the spine foundation in delivering economic spine care grew. Several referral centres and multiple outreach camps were developed across the country in collaboration with the government and charitable

organisations to identify patients with no access to spine care. This program includes setting up Rural Spine Care Centers (RSCC), consisting of spine operation theatres, spine clinics and spine wards, in the existing orthopaedic departments of the various government medical colleges in rural areas. The doctors are trained and sensitised by a series of lecture courses and workshops.

The Spine Foundation operates 13 RSCCs at Gadchiroli, Kolhapur, Nandurbar, Dehradun, Sittilingi, Akola, Ambajogai, Ratnagiri, Dhule, Aurangabad, Dharampur, Ranchi and Goa. So far, TSF has treated over 60,000 patients and performed over 1800 surgeries across India. This year The Spine Foundation is celebrating its 25th anniversary. If you want to know about them, look them up on Instagram and Facebook. Or write to them at thespinefoundation365@gmail.com.







Inauguration of Cochlear Implant Program

Spiritual Guru Shri Shri Ravishankar graced the Lilavati Hospital and Research Center on 25th Feb 2023. Gurudev inaugurated the cochlear implant program run by the ENT department of the hospital for hearing disabled individuals. This program is benefiting many individuals from all classes of the society. After the inauguration Gurudeva a well-known spiritual icon blessed the hospital, all the staff, the audiences and showered the words of wisdom. His pearls of wisdom and encouragement will go a long way in boosting the moral of all the staff and will be a big motivation to all. Lilavati hospital takes pride in hosting the visit of national figure like Gurudev Shri Shri Ravishankar.



Events @ Lilavati Hospital



Do no harm to patient.

This is one of the principles in practice of medicine and Infection control plays a significant role in this. We at Lilavati Hospital & Research Centre tried to spread awareness about how infection control plays an important role in patient care in a fun-learning way, in the form of Infection "In- Control" Mela on 27th April,2023. Our staff, resident doctors and consultant participated with full zeal and enthusiasm. It covered all aspects of infection control like Hand hygiene,

Isolation precautions, prevention of Health care associated infections, Antimicrobial stewardship, Needle stick injury & blood/body fluid exposure, spill management, vaccines and vaccine preventable diseases through various stalls with information imparted through activities and games. Poster Making and Slogan writing competition was also observed with overwhelming participation. **It's not merely infection control rather it is Infection "In Control"**.

Few Glimpse of Infection "In Control" Mela

Inauguration



Various stalls with information imparted through activities and games.











Creating awareness by Learning with Fun











INTERNATIONAL NURSES DAY-12TH MAY 2023

International Nurses Day is celebrated around the world on 12 May, the anniversary of Florence Nightingale's birth. International Council of Nurses commemorates this important day each year with the announcement of the theme for International Nurses Day. *The theme for 2023: "Our Nurses. Our Future."*

The Nursing Department of Lilavati Hospital celebrated the Nurses day week started from 8th May to 12th May to appreciate the contribution of nurses in health care services. *"Our Nurses. Our Future."* sets out what we want for nursing in the future in order to address the global health challenges and improve global health for all. It is therefore important to **Invest, Protect, Respect and Value** nurses to be prepared to face health care challenges like the COVID pandemic.

Glimpses of Celebration of International Nurses Day





Doctors Associated with Lilavati Hospital

Dr. Sanzgiri P. S.

Andrology Dr. Shah Rupin S. Anaesthesiology Dr. Baxi Vaibhavi Dr. Budhakar Shashank Dr. Gandhi Nisha Dr. Gaiwal Sucheta Dr. Gawankar Prakash Dr. Kharwadkar Madhuri Dr. Khatri Bhimsen Dr. Kulkarni Satish K. Dr. Mahajan Anjula Dr. Mascarenhas Oswald Dr. Kothari Namrata Dr. Patil Prajakta Dr. Shah Falguni Dr. Waradkar Samidha Audiology & Speech Therapy Mr. Bhan Satvan Ms. Gorawara Pooja **Bariatric Surgery** Dr. Khandelwal Nidhi Dr. Palep Jaydeep Dr. Shah Shashank **Blood Bank** Dr. Mehra Ruhi **Cardiovascular & Thoracic Surgery** Dr. Bhamre Bipeenchandra Dr. Bhanushali Amol Dr. Bhattacharya S. Dr. Honnekeri Sandeep T. Dr. Irniraya Krishna Prasad Dr. Jaiswal O. H. Dr. Joshi Suresh Dr. Kumar Pavan Dr. Mehra Arun P. Dr. Nand Kumar Dr. Pandey Kaushal Dr. Rachmale G. N. Dr. Ravishankar V. Dr. Vichare Sanjeev Cardiology Dr. Bajaj Harish Dr. Ballani Prakash Dr. Bang Vijay Dr. Dargad Ramesh R. Dr. Gokhale Nitin S. Dr. Jhala Darshan Dr. Kothari Snehal N. Dr. Kudva Srinivas Dr. Lokhandwala Yash Dr. Mehan Vivek Dr. Merchant S. A. Dr. Menon Ajit R. Dr. Mehta Haresh G. Dr. Nabar Ashish Dr. Pillai M. G. Dr. Pinto Robin Dr. Punjabi Ashok H. Dr. Rao Anand Dr. Rao Ravindra Singh Dr. Samuel K. Mathew

Dr. Shah Chetan Dr. Sheth Siddharth Dr. Suratkal Vidya Dr. Vijan Suresh Dr. Vyas Pradeep R. Dr. Vora Amit Dr. Vajifdar Bhavesh **Chest Medicine** Dr. Chhajed Prashant Dr. Mahashur Abha Dr. Mehta Sanjeev K. Dr. Prabhudesai P. P. Dr. Parkar Jalil D. Dr. Raj Rishabh Dr. Rang Suresh V. **Colorectal Surgery** Dr. Chulani H. L. **Dentistry / Dental Surgery** Dr. Bhavsar Jaydeep P. Dr. Deshpande Dilip Dr. Gala Jigar Dr. Joshi P. D. Dr. Khatavkar Arun Dr. Kamdar Rajesh J. Dr. Parulkar Darshan Dr. Samath Shyamcharan Dr. Sanghvi Sameer Dermatology Dr. Goyal Nilesh Dr. Malvankar Dipali Dr. Mehta Nimesh Dr. Oberai Chetan Dr. Parasramani S. G. Dr. Pillai Jisha **Diabetic Foot Surgery** Dr. Rege Tushar Dr. Vaidva Sanjav Diabetology Dr. Panikar Vijay **Diabetology & Endocrinology** Dr. Joshi Shashank R. Dr. Naik Vaishali Dietician Dr. Pai Veena ENT Dr. Dhingra Preeti Dr. D'souza Chris E. Dr. Jayashankar Narayan Dr. Parasram Kamal S. Dr. Pusalkar A. Dr. Shetty Adip (Cochlear Implant) **Endocrine Surgery** Dr. Agrawal Ritesh **Endo Urology** Dr. Utture Anand **Gastro Intestinal Surgery** Dr. Bharucha Manoj Dr. Desai Gunjan Dr. Jain Hemant Dr. Khandelwal Nidhi Dr. Kulkarni D. R. Dr. Mehta Hitesh Dr. Palep Jaydeep

Dr. Shaikh Taher Dr. Varty Paresh Dr. Wagle Prasad K. Dr. Zaveri Jayesh P. Foot and Ankle Dr. Kini Abhishek Gastroenterology Dr. Barve Jayant S. Dr. Choksi Mehul Dr. Kanakia Raju R. Dr. Parikh Samir S. Dr. Patel Ruchit Dr. Phadke Aniruddha Y. **General Surgery** Dr. Mehta Narendra Dr. Nikam Narendra Dr. Parikh Ratna Dr. Thati Vinaykumar Dr. Trivedi Narendra Gynaecology Dr. Agarwal Rekha Dr. Chhabra Neelam Dr. Coelho Kiran S. Dr. Dudhedia Udhavrai Dr. Goyal Swarna Dr. Medhekar Mansi Dr. Nanavati Murari S. Dr. Pande Shinjini Dr. Pai Hrishikesh Dr. Pai Rishma D. Dr. Palshetkar Nandita Dr. Salunke Vivek Dr. Shah Cherry C. Haematology Dr. Agarwal M. B. Dr. Bhave Abhay Headache & Migraine Dr. Ravishankar K. Healthcheckup Consultant Dr. Desai Sandeep Histopathology Dr. George Asha Mary Dr. Tampi Chandralekha **Infectious Diseases Consultant** Dr. Nagvekar Vasant C. Intensivist / Physician Dr. Gobole Chinmay Dr. Kavita S. Dr. Shekade Kiran Dr. Shrinivasan R. Dr. Vas Conrad Rui Interventional Neuroradiology Dr. Limaye Uday S. **Interventional Radiology** Dr. Karnik Nikhil Sudhir Dr. Kulkarni Nikhil Dr. Rai Jathin Krishna Dr. Sheth Rahul Dr. Warawdekar Girish Joint Replacement Surgery Dr. Maniar Rajesh N. **Lactation Consultants** Ms. Temkar Swati Liver Transplant Dr. Shaikh Tahir



Plastic & Reconstructive Surgery

Dr. Mehta Hemant J. Dr. Shah Arun Dr. Suratkal L. H. Dr. Upadhyaya Kirti L. Neurology Dr. Chauhan Vinay Dr. D'souza Cheryl Dr. Deshpande Rajas Dr. Sirsat Ashok M. Dr. Soni Girishkumar Dr. Vyas Ajay Neuropsycology Ms. Panjwani Siddhika **Neuro Surgery** Dr. Ambekar Sudheer Dr. Andar Uday Dr. Dange Nitin Dr. Goel Atul Dr. Nayak Madhukar Dr. Parekh Harshad Dr. Pawar Sumeet Dr. Ramani P. S. **Nuclear Medicine** Dr. Krishna B. A. Dr. Shaikh Nusrat Oncology Dr. Lokeshwar Nilesh Dr. Menon Mohanakrishnan Dr. Parikh Bhavna Dr. Shah Akshav Dr. Smruti B. K. Oncosurgery Dr. Bushan Kirti Dr. Chabra Deepak Dr. Chedda Yogen Dr. Gupta Amit Dr. Jagannath P. Dr. Katna Rakesh Dr. Mullerpatan Prashant Dr. Parikh Deepak Dr. Rao Satish Dr. Sharma Sanjay Dr. Shah Rajiv C. Dr. Shetty Shravan S. Ophthalmology Dr. Agrawal Vinay Dr. Doshi Ashish S. Dr. D'souza Ryan Dr. Mehta Salil Dr. Mehta Himanshu Dr. Nagvekar Sandeep S. Dr. Parikh Rajul Dr. Shah Manish Dr. Shah Sneha Dr. Vaidya Ashish R. **Orthopaedic Surgery** Dr. Agrawal Pranav Dr. Agrawal Vinod Dr. Amyn Rajani Dr. Archik Shreedhar Dr. Bhandari Hemant Dr. D'silva Domnic F. Dr. Garude Sanjay Dr. Ghangurde Bipin Dr. Gurav Suraj Dr. Joshi Anant Dr. Kashikar Aaditya D.

Dr. Kasodekar Vaibhav

Nephrology

Dr. Kodkani Pranjal Dr. Kohli Amit Dr. Mahale Avinash Dr. Moonot Pradeep Dr. Mukherjee Sunirmal Dr. Nadkarni Dilip Dr. Narurkar Abhishek Dr. Nazareth Ritesh Dr. Padgaonkar Milind Dr. Panchal Lalit Dr. Pandey Alok Kumar Dr. Panjwani Jawahar S. Dr. Shetty Nagraj Dr. Vaidya Shrinand Dr. Vatchha Sharookh P. Dr. Vengsarkar Nirad Dr. Warrier Sudhir Pathology Dr. Chavan Nitin Dr. Gohel Tejas Dr. Mehta Kashvi Dr. Natarajan Shripriya Dr. Rangwalla Fatema **Paediatric Surgery** Dr. Bangar Anant Dr. Karmarkar Santosh J. Dr. Nathani Rajesh Dr. Redkar Rajeev G. **Paediatrics** Dr. Chittal Ravindra Dr. Gupta Priyam Dr. Sharma Shobha Dr. Ugra Deepak Paediatric Cardiology Dr. Bhalgat Parag Paediatric Critical Care/NICU Dr. Sheikh Minhaj Ahmed Paediatric Endocrinology Dr. Parikh Ruchi Paediatric Hemato-Oncology Dr. Kanakia Swati Dr. Swami Archana **Paediatric Neurology** Dr. Kulkarni Shilpa Dr. Shah Krishnakumar N. **Paediatrics Nephrology** Dr. Ali Uma Paediatric Opthalmology Dr. Doshi Ashish **Paediatric Orthopedics** Dr. Aroojis Alaric Dr. Johari Ashok N. **Paediatric Pulmonology** Dr. Khosla Indu **Pain Medicine** Dr. Baheti Dwarkadas Dr. Jain Jitendra **Physicians / Internal Medicine** Dr. Ballani A. G. Dr. Bandukwala S. M. Dr. Gidwani Vinod N. Dr. Jadwani J. P. Dr. Medhekar Tushar P. Dr. Medhekar Amey T. Dr. Nair C. C. Dr. Shikarkhane Pushkar Dr. Shimpi Shrikant

Dr. Kini Abhishek

Dr. Agarwal Meenakshi Dr. Barve Devayani Dr. Dixit Varun Dr. Jain Leena Dr. Kumta Samir Dr. Magdum Ashish A. Dr. Nehete Sushil Dr. Prakash Siddharth Dr. Purohit Shrirang Dr. Vaidya Sanjay Dr. Wagh Milind Psychiatry Dr. Deshmukh D. K. Dr. Shah Bharat R. Dr. Vahia Vihang N. Psychology Ms. Chulani Varkha Physician / Rheumatology Dr. Sangha Milan Physiotherapy Ms. Garude Heena **Radiology & Imaging** Dr. Deshmukh Manoj Dr. Dhedia Khyati Dr. Doshi Pankaj Dr. Gupta Kanchan Dr. Kamath Satish Dr. Lokhande Kaustubh Dr. Mehta Mona Dr. Tvagi Neha **Rehab Medicine** Ms. Shah Labdhi Rheumatology Dr. Chitnis Neena Dr. Gill Niharika Dr. Sabnis Shailaja **Spine Surgery** Dr. Bhojraj Shekhar Dr. Chaddha Ram Dr. Kundnani Vishal Dr. Mohite Sheetal Dr. Nagad Premik Dr. Nene Abhay Dr. Patel Priyank Dr. Ruparel Samir Dr. Varma Raghuprasad Urology Dr. Bhagat Suresh Dr. Pahade Sachin Dr. Pathak Hemant R. Dr. Raina Shailesh Dr. Raja Dilip Dr. Sanghvi Nayan Dr. Shah Sharad R. Dr. Vaze Ajit M. Dr. Venkatramani Vivek Urological Laparoscopy Surgery Dr. Ramani Anup **Urodynamics Consultant** Dr. Dastur B. K. Vascular Surgerv Dr. Karnik Nikhil Sudhir Dr. Patel Pankaj Dr. Pai Paresh

VELYS LATEST GENERATION ADVANCED ROBOTICS SYSTEM FOR KNEE JOINT REPLACEMENT





PRECISION



FASTER Recovery



NO CT/MRI Pre-surgery

FOR ENQUIRIES CALL: 82912 80428



Lilavati Hospital and Research Centre

More than Healthcare, Human Care

NABH Accredited Healthcare Provider

A-791, Bandra Reclamation, Bandra (W), Mumbai - 400 050. **Tel.:** +9122-6930 1000, +9122-6931 8000 **Email:** info@lilavatihospital.com • **Website:** www.lilavatihospital.com