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LILAVATI HOSPITAL MEDICAL TIMES

JANUARY 2020





Lilavati Hospital and Research Centre *More than Healthcare, Human Care* NABH Accredited Healthcare Provider

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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. Fax: 91-22-2640 7655 Email:medicaltimes@lilavatihospital.com Website: www.lilavatihospital.com

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From COO's Desk



There are so many delightful events in this hospital that it is difficult to decide where to begin !

It gives me immense pleasure at this moment to inform all our readers that we have done extremely well in the recently concluded third NABH assessment of the hospital, and there were appreciations all over the place especially to the nurses. Great job done by all of you!

I am also glad to announce that we have successfully conducted three liver transplants with more on the anvil. We thank the liver transplant team for their efforts. In the same vein, I also have the pleasure to announce that we have received the sanction for heart transplants too and we are gearing up to perform the same.

We extend our congratulations to Dr P Ramani on being conferred the Saraswat Ratna Puraskar and Goa Bhushan award for exemplary service to the society. We are also extremely proud to announce that our very own Consultant in Paediatric Surgery, Dr Rajeev Redkar, has the unique distinction of being the first to author a book on Paediatric Surgery in India with contributions from all over the world in the 200 odd chapters. Congratulations to him too. During this period three of our consultants, Dr Prabhudesai, Dr Maniar and Dr Redkar were felicitated with the Best Teachers award by ANBAI.

So also we are immensely proud to see multiple national and international publications and presentations in conferences from our post graduates in different disciplines that the hospital has provided and nurtured. They have also been recipients of awards in their field. We hope they continue to generate such high quality papers to boost the high academic image of the hospital. I believe that the atmosphere of intense academics through numerous CMEs, workshops and Conferences conducted by our consultants may have stimulated them to push their limits. To add to this is the excellent record of our DNB students who have done us proud by clearing their courses to add to the aura of academic excellence in Lilavati Hospital.

We thank all the consultants and patients for being tolerant at the time of the refurbishment of the hospital especially the ICU and AKD. We have been able to relocate the patients to different floors in the hospital so as not to lose beds and continue to provide excellent services to our patients despite the construction activities for the renovation.

As a responsibility to the community, we have started a medical service at Dadar station manned 24 hours for railway accident victims and for commuters needing basic treatment for which a chemist shop has also been established there.

Branching to other areas we are glad to announce a Hydrotherapy centre (Oxygen therapy) called Belhydro PURO2 on the 8th floor of the hospital. This uses water and oxygen for skin moisturising and deep skin cleaning as well as naturally making the skin supple.

For the patients kin and relatives who throng the hospital during visiting hours we have a renovated cafeteria with more features and food items than before with a comfortable ambience to reduce their stress levels.

The icing on the cake was when a high level committee from the Dubai Health Authority visited our hospital and praised us for the high quality healthcare that we were offering our patients.

The current publication carries many articles and information to enhance our skills and knowledge in different fields.

It is my proud privilege and honour to extend warm greetings and heartfelt gratitude to all the staff of LHRC for the exemplary performance and achievements in 2019.

Wishing you all a Very Happy and Prosperous 2020.

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

Chief Operating Officer Consultant – CVTS MS (General Surgery), DNB (General Surgery), MCh.(Cardiothoracic Surgery)

Editorial



The feedback from our previous issue dated August 2019 was gratifying. The content and academics were highly appreciated across the ranks and I profusely thank all the contributors for its success. Kudos to our marketing team and the doctors for providing this feast to our readers.

The quality of articles and case reports will assure credibility to this edition and our future editions as assured by the consultants in the Hospital with genuine case reports, discussions, prospectives and research data generated from the Hospital. We will also include medical excerpts from conferences held in the Hospital.

This time also the contents of this magazine include several brilliant case reports which bring out the excellent medical / surgical work in our hospital. Please take part in the quiz and spot the diagnosis.

We will publish every time a new aspect or a perspective from every specialty branch and this time the review article on Optical Coherence Tomography Angiography of how to diagnose medical issues in ophthalmology is ready for your perusal and will invite interest amongst the clinicians in practice.

As promised we have given links to guidelines for excellent data in different specialties for a quick reference to satisfy the academic thirst of our many readers.

Please read this magazine cover to cover to maximally utilize the academic feast within it and enjoy this publication.

Do continue to give us a feedback with criticism and / or suggestions to assist us in improving the publication- after all we are here to empower you with more knowledge, the more we share the more we learn!

Here's wishing you a fruitful reading, knowledge assimilation and a happy healthy new year 2020.

Dr. Abhay A Bhave Chief Editor, MD, FRCPA, Haematologist



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 has engaged in innumerable charitable endeavors across India.

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

Smt. Sushila V. Mehta Shri Kishor K. Mehta Smt. Charu K. Mehta Smt. Rekha H. Sheth Shri Niket V. Mehta

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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

- 323 bedded hospital including 77 intensive care beds
- 12 state-of-the-art well equipped operation theatres
- Full-fledged Dental & Dermo cosmetology clinic
- State of art PET SPECT CT department
- Lilavati Hospital is recently equipped with Coronary GRAFT Patency Flowmeter which is first of its kind in India. This imaging system is used in Cardiac surgery to assess GRAFT flow / perfusion in coronary bypass surgery.
- 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.
- ICU Emergency charges after 8pm are kept at par with the day time and additional charges are withdrawn.
- More than 300 consultants and manpower of nearly 1,800.
- Hospital attends to around 400 In-patients and Out-patients daily.
- Modern Cathlabs having specialized SICU & ICCU with highly trained cardiac care medical staff
- Lilavati Kirtilal Mehta Medical trust is an approved research organization by Ministry of Science & Technology having all modern facilities necessary for conducting research

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.



Review Article

Optical Coherence Tomography Angiography

Dr. Salil Mehta, MS, DNB

Optical coherence tomography angiography (OCT-A) has recently been introduced as a true technology for the non-invasive study of the retinal and choroidal vasculature. Though the technology was devised earlier, it became commercially available from the year 2014 onwards. OCT-A technology reflects a laser beam onto red blood cells, captures the reflected beam and uses a complex algorithm to build a picture of the underling vasculature. This helps to delineate the vessels in individual layers of the eye. The scans of a specific area are repeatedly performed and the subtle changes between the images are used to distinguish between high, low or no flow areas..

The laser beam is emitted from a swept-source OCT (SS-OCT) which uses a long wavelength (1050nm). This long wavelength facilitates deeper penetrance into tissue and is more useful for eyes with opaque media. Two technologies are used for motion detection : amplitude decorrelation and phase variance which either assess the subtle changes in the amplitude between two successive scans or detect variations in the phase of the light when it reflects off moving cells. The standard processed image shows four distinct zones: the superficial retinal plexus, the deep retinal plexus, the outer retina and the choriocapillaris.

Advantages over conventional angiography methods

- This test has a greatly reduced time and is totally injection free. This technology eliminates the need for intravenous dyes (sodium fluorescein), thus negating the risk of anaphylaxis or toxicity.
- In addition, this test can provide quantitative data of the retinal vessels as opposed to the merely qualitative data on fluorescein angiography.

Clinical Applications

Retina

- OCT-A has been reported to be useful in the diagnosis and understanding of many retinal conditions, namely:
- Diabetic retinopathy helps to delineate microaneurysms and neovascularization. It also permits accurate delineation and numerical analysis of the foveal avascular zone.
- Age-related macular degeneration helps to study the choriocapillaris flow and can assess the extent of the degeneration
- Wet age-related macular degeneration This provides superior delineation of the choroidal neovascular membranes at detection, permits subtype classification and also changes post intravitreal injections.
- Central serous chorioretinopathy
- Vascular occlusions studies of the nonperfused retina allow better decision making for the use of injections or laser treatment.
- Macular telangiectasia identification of the pathological vessels.
- Choroidal neovascular membranes of indeterminate cause.

Glaucoma

- OCT-A is also useful for optic nerve diseases such as glaucoma. It is useful for studying
- optic disc circulation in patients with glaucoma. It may also play a role in early glaucoma detection.

Uveitis : Useful in

- inflammatory vasculitis
- birdshot chorioretinopathy
- · Inflammatory cystoid macular edema







Case Report: Cardiovascular and Thoracic Surgery

Diagnosis and Management of a Rare Case of Ruptured Sinus of Valsalva Aneurysm into Right Atrium.

Dr. Charan Reddy K.V., MD (Med), DNB (Med), DNB (Card), MBA(HM), Associate Cardiologist
Dr. Pavan Kumar, MS, MCh(CVTS), Consultant Cardio-Thoracic Surgeon
Dr. Namrata Kothari, MD (Anaesthesia), Consultant, Dept of Anaesthesia
Dr. Bhavesh Vajifdar, MD(Med), DNB(Card), FACC, Consultant Cardiologist
Dr. Vidya Suratkal, MD(Med), DM(Card), FACC, Consultant Cardiologist
Dr. Aniket Vazirani, MBBS, ECFMG, Medical Officer

INTRODUCTION

Ruptured sinus of Valsalva (RSOV) is a rare lesion in both pediatric and adult population¹. A right sinus of Valsalva aneurysm usually ruptures into the right ventricle, while aneurysms of non-coronary sinus rupture into the right atrium². Here we present an uncommon presentation of Right coronary cusp aneurysm rupturing into the right atrium.

CASE REPORT

A 40-year-old male, driver by profession, with no known co-morbidities came to us with a history of palpitations and progressive dyspnea on exertion(NYHA class II) for the last 3 months. He gives no H/O alcohol, tobacco consumption or smoking. There was also no history of any cardiac interventions in the past. On examination, the heart rate was 82/min, respiratory rate was 18/min, blood pressure was 134/36 mmHg. The pulse was bounding with a 'water hammer character'. Oxygen saturation of 96% in room air. Jugular venous pressure(JVP) was elevated(7 cm above sternal angle) with prominent A wave. His arm span to height ratio was <1 with other signs of Marfan's syndrome also absent.

On auscultation of the chest, S1 was normal and S2 was normally split with a loud P2 component. There was a high-pitched, grade 4/6, continuous murmur with maximum intensity in systole at the lower left sternal edge, with the intensity of murmur increasing in sitting forward position and on clenching of fists.

Electrocardiogram(ECG) showed normal sinus rhythm with a QRS axis of -30°. X-ray of chest showed enlargement of mediastinum and cardiomegaly, right atrial enlargement, dilated pulmonary artery segment with pulmonary plethora. A combination of these findings is suggestive of ruptured sinus of Valsalva.

Echocardiographic (2D-ECHO) and image showed a large aneurysm at the sinus of Valsalva arising from the right coronary cusp and protruding into the right atrium with rupture at the tip, leading to continuous turbulent flow into right atrium.No other cardiac deformities were detected (Figure 1). CT aortogram and 3D reconstruction image also showed sinus of Valsalva aneurysm opening into the RA chamber (Figure 2).



Figure 1 - TTE image showing sinus of Valsalva aneurysm on a 5 chambered view





Figure 2: CT Coronary angiography and 3D reconstruction image showing sinus of Valsalva aneurysm opening into the RA chamber





Figure 3: Aortic root angiographic film showing aneurysm of right sinus of Valsalva with dye extravasation into the RA chamber



Schematic diagram showing the anatomy and surgical approach employed.

Aortogram, CAG, and Cardiac catheterization were done which showed a large saccular aneurysm of the right coronary sinus, emptying into the low-pressure chamber of the right atrium(Figure 3).CAG showed a right dominant circulation with ectasia of the right coronary artery but without any coronary artery disease or anatomical variation of the coronary circulation. There was a step up in oxygen saturation in the right atrium(88%) compared to IVC(68%) and SVC(72%) and filling of the right heart chambers by contrast medium from the ascending aorta confirming ruptured sinus of Valsalva into the right atrial chamber.

The patient was initially managed with diuretics and vasodilators followed by surgical repair of RSOV aneurysm due to insufficient margins and its proximity to the aortic valve, we decided against percutaneous closure.

Figure 4: Shows intraoperative image of the right coronary sinus aneurysm (forceps pointing it).



subsequent patch repair of the fistulous

opening of the right coronary sinus into the RA.

SURGERY:

The patient was taken up for open heart surgery on 11th Oct 2019, by a team headed by the Cardio-Thoracic surgeon, Dr. Pavan Kumar. After establishing routine

cardiopulmonary bypass (CPB), Right Coronary Sinus (RCS) aneurysm & its track to right atrium were identified. The next step was the isolation of the right atrium, with aortotomy & right atriotomy. Aneurysmal track from RCS was found to be entering the inter-atrial septum, with a cherry size aneurismal sac bulging into the RA chamber with its opening at the junction of superior vena cava and right atrium. The surgery involved exposing the full fistulous track with excision of the redundant sac. The fistulous opening in RA, aorta and RCS aneurysm was closed with a patch. This was followed by reconstruction of the interatrial septum, closure of aorta and right atrium(Figure 4,5). The rest of the surgery involved the termination of CPB & routine surgical closure. Intra-operative TEE showed the closure of the fistulous track with no residual left to right shunt in the right atrium.

DISCUSSION:

Sinus of Valsalva aneurysm(SOVA) was first described by John Thurman in the year 18403. SOVA is thin-walled outpouchings of the sinus which may be tubular or saccular in shape. They are formed as the result of the separation between aortic media and annulus fibrosis⁴. They are commonly associated with Marfan's syndrome, syphilis, and infective endocarditis of aortic valve. Acquired sinus of Valsalva aneurysm can also result from surgery to aortic root or valve and during coronary interventions⁵.

RSOVs account for 1% of congenital anomalies of the heart and usually involve a single sinus and rarely more than one sinus is involved. Sinus of Valsalva aneurysms originates most commonly from the right coronary sinus (70%–90%), followed by noncoronary sinus (10%–20%) and rarely from the left sinus (<5%)⁶. Approximately, 50% of individuals have associated ventricular septal defect (VSD) which is the most commonly associated defect in patients of RSOV⁷. The bicuspid aortic valve, coarctation of the aorta, pulmonary stenosis, and atrial septal defect are less commonly associated defects. Approximately, 10% of patients with Marfan's syndrome may have sinus of Valsalva aneurysm.

Unruptured aneurysms are usually asymptomatic, often incidentally detected on echocardiography unless they are very large and compress mediastinal structures. Rupture typically occurs in young males after puberty with a male-to-female ratio of 4:1. RSOV is five times more common in Asians as compared to the Western population.

Aneurysm from right coronary sinus usually ruptures into RV and non-coronary sinus rupture into RA. Rupture of the left coronary sinus is rare and may cause pericardial effusion. Aneurysms of right sinus that rupture acutely present with acute-onset chest pain that resolves after some time but is soon followed by right-sided heart failure symptoms which are progressive in nature. Only about 30% of the patients present with chest pain or severe dyspnea of acute onset and the rest usually complain of progressive dyspnea worsening with time. Death from heart failure typically occurs within a year after rupture and so all the RSOV aneurysms should be repaired either percutaneously or surgically on detection. Large aneurysms can also compress coronary arteries causing angina as a predominant symptom.

The diagnosis of RSOV is often established by history and clinical examination. ECG may show evidence of chamber enlargement and features of volume overload of heart. Chest X-ray may also show cardiomegaly with increased pulmonary vascularity. Blood cultures should be taken at admission to rule out active infective endocarditis. Transthoracic two-dimensional echo showing typical "windsock deformity" clinches the diagnosis and transesophageal echocardiography (TEE) allows identification of structural anomalies and shunt location. A definitive diagnosis can be made with aortography and cardiac catheterization. Noninvasive tools such as cardiac computed tomography(CT) and magnetic resonance imaging(MRI) may also be used to detect RSOV.

All RSOV aneurysms need definitive therapy. Patients require initial stabilization and control of heart failure symptoms with diuretics, vasodilators, and inotropes. Treatment options include surgical repair or percutaneous device closure. The factors determining the choice of treatment are anatomic location and associated cardiac defects. Surgical repair is still the gold standard in the management of RSOV with in-hospital mortality of less than 5%. It is usually indicated in patients who have associated VSD or large RSOV with aortic end >12 mm, RSOV with multiple rupture sites or suspicion or evidence of aortic valve endocarditis.

Percutaneous closure of RSOV was first attempted by Cullen et al in 1994 using a Rashkind umbrella⁸. Catheter closure of RSOV is now a safe and feasible alternative to surgical repair in patients with no associated cardiac lesions. The most commonly used occlusion device is Amplatzer duct occluder (ADO), but other devices such as Amplatzer septal occlude(ASO) and muscular VSD closure devices have also been used. Complications of catheter closure include device migration, hemolysis, encroachment on to aortic valve leaflets or coronary Ostia and AV conduction disturbances.

CONCLUSION:

The rupture of the sinus of Valsalva into RA is a rare occurrence. Early detection and management are vital to reduce morbidity and mortality. Tetrad of features including a continuous murmur, elevated pulsating JVP, bounding pulse along with a history of sudden-onset chest or epigastric pain is highly suggestive of RSOV aneurysm9. Imaging techniques play an important role in early diagnosis and treatment. Treatment options include surgical repair or percutaneous device closure based on anatomy and associated cardiac defects.

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Case Report: Plastic Surgery

Hand Replant: Salvage sought like a Battle fought

Dr Leena Jain, Consultant Plastic and Reconstructive Microsurgeon **Dr Samir Kumta**, Consultant Plastic and Reconstructive Microsurgeon **Dr Neha Jain**, Clinical Fellow in Microsurgery

INTRODUCTION:

Amputations of the upper limb can have devastating physical and psychological consequences in patients of all age- groups, the impact being compunded if the dominant hand is affected. In guillotine amputations, all structures are injured at the same level with local crush while in a traction avulsion injury the different tissues are damaged at variable levels with components of crush, traction and avulsion. The musculotendinous units are avulsed from the proximal musculotendinous junctions with avulsion of all nerves impairing the final functional outcome (1).

Avulsion amputations were usually considered a strong relative contraindication for replantation in the past but with the increasing experience with replantations such amputations are worth replanting. Wrist disarticulations associated with forearm musculotendinous rupture and nerve avulsion is an infrequent pattern of injury that results from a violent pull at the wrist commonly seen in occupational injuries while in children these commonly result from the hand getting caught between two opposing doors or door frames.

Apart from the primary surgery to restore vascularity to the amputated extremity, secondary surgeries are an integral part of the treatment in complex replantations to restore function. Children have a very positive outlook and think that an amputated body part can be reattached and will work like before. This mindset is good for us and greatly influences the eventual outcome in such traumatic limb amputations. Also they accept deficits more easily and overcome challenges readily.

CASE REPORT:

A four year old girl child presented to Lilavati Hospital on 15th July 2019 at 11:30pm with her right hand disarticulated at the wrist due to avulsion after getting stuck in a moving elevator at around 7:00 pm. Dedicated centres doing replantations are limited in Mumbai, hence, the need to reach, a good centre on time is the first pre-requisite for a successful outcome. Parents brought the child here with the hand being transported in an ice box. Prior intimation by the referring orthopaedician helped us ensure timely intimation to all concerned departments (casualty, OT team, blood bank and laboratories, anaesthesia and orthopaedic teams) and the patient was shifted to OT within 30 minutes of reaching the casualty.

Surgical Procedure:

As the child was being induced, the amputated hand was dissected, debrided and all structures (tendons, nerves and vessels) were marked; while maintaining cold ischemia. Findings of the avulsion injury included (figures 1 and 2):

- proximally based avulsion of all three forearm nerves from the base of digits upto the wrist; found with the forearm stump
- distally based avulsion of flexor and extensor musculotendinous units from mid-forearm to wrist found with the amputated part
- laterally based avulsion of 2 inches wide skin flap covering the ulnar hemicircumferential area on the amputated hand
- Disarticulation at wrist joint





Figure 2

The stump was dissected, corresponding structures identified and the forearm bones were shortened by 2.5 inches in view of the loss of soft tissue over the distal forearm. Fixation was done as follows by the Orthopaedic team:

- Nail from 3rd metacarpal into the radius
- Wiring of radioscapholunate joints.

Subsequently the avulsed musculo-tendinous units were trimmed to the reduced forearm length. All extensor and flexors tendons/ musculotendinous junctions were repaired followed by radial artery anastomosis. The finger tips pinked up instantly with return of turgor. The hand was perfused within 7 hours of cold ischemia. IV bolus unfractionated heparin of 500 units was administered and a continuous infusion was maintained at rate of 1000 units over 6 hours. This was followed by end-end repair of three dorsal veins followed by repair of one venae commitant each of the radial and ulnar arteries. The distal end of the ulnar artery showed good back flow indicating a patent arch and its anastomosis was completed. All anastomoses were done under the operating microscope using 10-0 polyamide Figure 3 sutures swaged to micropoint round body needle. The avulsed nerves were buried between the tendinous structures (figure 3). This microsurgical procedure involves anastomosing arteries of size 1.0-1.5mm at the level of wrist and veins range between 0.8-1.0 mm .Carpal tunnel and dorsal interosseous compartments were released. Two of the anastomosed dorsal veins were thrombosed within 60 minutes and anastomoses were revised.

Full thickness graft, harvested from the avulsed skin flap, was used to cover the residual raw area over the wrist. Gentle dressing was done and above elbow splint applied with elbow at 100-110 degrees of flexion.

Saturation at the end of surgery in all fingers was 100 percent with good capillary refill.

This entire procedure lasted for about 9 hours during which the anaesthesia team had well maintained her systemic perfusion with blood and fluids.

The perfusion of the hand was monitored every hour for the next one week and heparin was continued at the same rate. Child was planned for skin grafting of the residual areas on post revascularization day (PRD) 8 and hence heparin infusion Figure 4 was stopped on day 7 at noon. Within 8 hours of stopping heparin, the hand became cold while maintaining a saturation of 100%. Vigilant monitoring by the nursing staff ensured that the child was taken up for surgery again without any delay. Hand was re-explored; findings included edematous and congested hand with dorsal skin discoloration (figure 4). Dorsal skin was debrided and dorsal veins were reanastomosed this time using saphenous vein interposition grafts going quite proximally and distally away from the zone of injury. Heparin was started again and continued throughout all subsequent surgeries. The temperature improved and

The grafts were covered with collagen and she was planned for a formal free flap cover to cover the areas of soft tissue loss after 48 hours.

The hand showed no fresh color changes but the temperature dropped again after 36 hours. She was taken up for the planned free flap and the veins were again found to be thrombosed. Revision venous anastomoses done and free gracilis muscle flap harvested and flap pedicle was anastomosed end to end with radial artery and its 0.3-0.5 mm venae commitantes using 11-0 polyamide sutures (figure 5). This is Figure 5 called supermicrosurgery based on the size of the vessels anastomosed (figure 6).

Saturation of the hand did not drop at any point in time, which indicated the continuation of arterial inflow and preservation of perfusion of intrinsic muscle viability.







Figure 6

skin mottling reduced.



By next morning PRD 11, she had significant oozing and on return to OT there was a haematoma over the flap pedicle compromising the flap perfusion. The hand was edematous and tense without any skin discoloration. On clearing the haematoma, the flap vessels were found to be patent and muscle colour improved all over except the distal 1/5th. This time again the dorsal hand veins were found to be thrombosed. After having done the veins about 6-7 times, there was no scope of going further distally towards the digital veins. Thenar and hypothenar compartments were decompressed with fasciotomy incisions. Negative pressure wound therapy dressing was applied contemplating that it wound aid in some venous outflow while some venous communications must have started forming. Over the next 8 days, she underwent two dressing changes. Her saturation in all fingers was mainatained throughout at 100 with no further skin discoloration. Fingers continued to remain cold.

On PRD 18 she was taken up for skin grafting of the gracilis muscle and other residual raw areas (figure 8).

By day 30, she had a few residual raw areas, edema had reduced significantly and physiotherapy was initiated.



Volar surface skin graft

scle flap and skin gr

Figure 8

11



DISCUSSION

Injuries resulting in amputation or ischemia of the upper limb have potential lifechanging consequences. Avulsion amputations are relative contraindications for replantations but with increasing experience with such cases, functional outcome in such mutilating injuries are also improving steadily (1).

There are multiple factors that influence the outcome of replantation surgery in the hand including type of amputation guillotine(90-95%) versus avulsion amputation(68%); level of amputation-proximal or distal; timing of presentation; co-morbidities, smoking history and surgeons' experience (2).

Radiocarpal or wrist disarticulations with proximal neuromuscular avulsions are severe injuries where the management protocol has not been well defined. Shortening of the forearm bones and wrist fusion are inevitable. For soft tissue losses associated with avulsion injuries, free flaps may be required to cover the skin defects or even flow-through flaps. Following replantations, strict vigilance is required in the immediate post-operative period and may need re-exploration.

Secondary surgery is an integral part of the treatment in complex replantations. The number of secondary procedures reported for major replantations is around 3-4. These procedures include joint fusion- thumb trapeziometacarpal joint arthrodesis and volar MCP joint capsulodesis. Tendon transfers may be difficult to do due to the lack of uninjured potential motors. Free functional muscle transfers may be required for proximal avulsive injuries of the forearm (3).

ACKNOWLEDGEMENT

This single case of wrist avulsion amputation in a young child describes the complexity of the procedure, the need for postoperative vigilance for a prolonged period and unpredictable course of events which mandate timely interventions in order to salvage the hand. The entire drill gets harmonized with ease when a well orchestrated team of Anaesthesiologists, Orthopaedic surgeons, Paediatricians, Haematologists, paediatric and surgical residents, Operation theatre staff, nursing staff and laboratory personnel provide their efficient and dedicated services as in this case. The Plastic Surgery team owes the successful salvage of this child's hand to all the above departments mentioned.

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Figure 9

Case Report: Paediatric Surgery

Case Report: Sharp Foreign Body Inhalation

Dr Shruti Tewari, DNB Resident, Paediatric Surgery Dr Rajesh Nathani, Consultant Paediatric Surgery

CASE REPORT:

A 14-month old male boy was brought with a history of foreign body (FB) ingestion. He had a mild cough but was otherwise asymptomatic. Chest X-ray with anteroposterior and lateral views suspected presence of a pin in the trachea, entering into the left main bronchus. A CT chest was done to confirm the exact location. During bronchoscopy, the pin was visualized at the carina, partly entering the left main bronchus. It was brought out carefully with no damage to any surrounding structures. A chest x-ray was done post removal, and the patient was discharged within 24 hours of admission.



Figure 1: Pre-op Chest X-ray



Figure 2: Pre-op CT scan





Figure 3: Foreign Body

Figure 4: Post-Op Chest X-ray

DISCUSSION:

Foreign body aspirations can occur at any age, but the reported incidence is highest in the age group of 0 to 3 years. This can be attributed to the fact that children in this age group cannot chew effectively and tend to keep the food in the mouth longer than usual, leading to aspiration. Also, children under the age of two try to learn about almost every object by mouthing, leading to increased incidence of non-organic or sharp foreign body ingestion [1]. Most importantly, the airway in a child has a much smaller diameter, thus making it prone to getting obstructed easily [2].

The patient might be asymptomatic at presentation or could have symptoms like cough, dysphagia, or stridor. Inhaled foreign objects can cause choking or gagging as they pass through the epiglottis and vocal cords.

Only 16% of foreign bodies are diagnosed by x-ray chest as they are radiopaque, so a negative film does not exclude aspiration [3]. Metallic objects are easily visualized by x-rays. CT has a superior diagnostic yield as compared to X-ray, mainly for radiolucent foreign and 3D reconstruction can provide exact localization of the foreign body.

For sharp foreign bodies, a rigid bronchoscope with a large diameter is preferred in pediatric patients because there is good access to the subglottic region and better oxygenation. Risk of injury can be minimized if FB is retrieved within the rigid barrel of the scope, and the entire assembly is removed en bloc. Fiber-optic flexible bronchoscopy can be rapidly and safely performed under local anesthesia with minimal sedation but is mostly preferred in adults. The biggest problem with the flexible bronchoscope is the restricted ability to ventilate the patient while doing the procedure.

Various studies have reported an incidence of negative bronchoscopy, but the literature emphasizes that a patient with a history of foreign body aspiration should undergo urgent bronchoscopy, and some negative bronchoscopies are acceptable in order to prevent the morbidity that occurs from a missed foreign body aspiration [4]. Unsuccessful attempts to remove a foreign body might push it more distally, making it difficult to retrieve. Major complications include bleeding, pneumothorax, and respiratory distress, but they occur rarely.



CONCLUSION:

FB aspiration should be considered as a differential in any young child with unexplained cough as it is a potentially lifethreatening situation. Sharp foreign bodies might cause fatal complications because of the added risk of penetrating through the respiratory tract into surrounding vital structures. Rigid bronchoscopy is successful in the majority of the patients.

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Case Report: Cardiology

How a Twiddle can lead to Twiddler's Syndrome:

Dr Charan Reddy K.V., MD(MED), DNB(MED), DNB(CARD), MBA(HM), Associate Cardiologist Dr Suresh Vijan, MD(MED), MRCP(CARD), Consultant Cardiologist Dr Ramesh Rathod, MD(MED), 2nd Year Resident Dr Abhishek Ghadge, MD(MED), 2nd Year Resident

INTRODUCTION:

Twiddler's syndrome refers to permanent malfunction of a pacemaker due to the patient's manipulation of the pulse generator. This causes coiling of the lead and its dislodgement, resulting in failure of ventricular pacing. It is a rare complication seen in post pacemaker implantation patients. The majority of patients with this condition are diagnosed within the first year of implant. However, we report a late case of Twiddler's syndrome seen after 2 years of implantation of the permanent pacemaker.

CASE REPORT :

68 year old obese female presented to us with history of recurrent episodes of syncope associated with complete loss of consciousness for several seconds, and shortness of breath(NYHA class II) for the last two weeks. She underwent dual chamber pacemaker insertion 2 years back. She also gives history of ischaemic heart disease, hypertension, diabetes mellitus and chronic kidney disease on medication. On examination, heart rate was 40 beats/minute and blood pressure 130/80 mmHg. Systemic examination showed bilateral crackles on auscultation of chest with no cardiac murmurs or added heart sounds. She also had no cognitive defects.

ECG revealed sinus bradycardia of rate 40 beats/minute with intermittent complete heart block(CHB) and alternating junctional rhythm(Figure 1). Echocardiogram revealed inferior wall hypokinesia with a left ventricular ejection fraction of 45 %. Routine laboratory parameters were within normal limit, except for elevated serum creatinine of 2.1 mg/dL. Electrolyte imbalance and hypothyroidism were also excluded. Drug history did not include any beta blockers medication. Chest X-ray done showed coiling of the atrial and ventricular leads with total displacement of pulse generator, with its head now pointing downwards. (Figure 2). Fluoroscopy done also showed that the atrial and ventricular leads encircled around the pulse generator just like a fishing line wound around a reel.

A temporary pace maker (TPM) with single RV apex lead at a rate of 60 beats per minute was immediately inserted. After 3 days, she was taken up for permanent pacemaker battery and lead repositioning. On exploration, the leads were found to be grossly entangled and damaged. They were uncoiled manually and replaced. The pulse generator was secured again within the pocket with additional non-absorbable sutures to prevent device migration.

A repeat chest X-ray post procedure confirmed appropriate battery and lead positioning(Figure 3). She was discharged on day 3 and counseled against further twiddling with the device. She is on regular follow up and is currently asymptomatic.



Figure 1 : ECG showing a Atrial rate of 60 bpm, Ventricular rate is 30 bpm with a slow ventricular escape rhythm suggestive of Complete Heart Block(CHB). There was no pacemaker spikes on ECG indicating failure of pacing by the implanted pacemaker.



Figure 2: X ray chest shows coiling of the atrial and ventricular leads like 'a fishing line wound around a reel' with total displacement with migration of pulse generator in the subcutaneous plane of chest wall.



Figure 3 : A labeled X ray showing well positioned pulse generator in the pocket and dual chamber pacemaker leads.



DISCUSSION:

Twiddler's syndrome was first described by Bayliss et al in 1968. The pacemaker-twiddler's syndrome 1,2 is rare with an estimated frequency of around 0.07-7 %. Continuous 'twiddling' or manipulation of the pulse generator within its skin pocket, by the patient, leads to a painless dislodgment of device and subsequent coiling of the lead causes lead dislodgement, leading to pacemaker malfunction. This phenomenon, often leads to fatal device failure, when it involves implantable cardioverter-defibrillators(ICD) and cardiac resynchronisation therapy(CRT).

Sequence of symptoms begins with the patient's deliberate or subconscious spinning of the pacemaker's pulse generator in a capacious pocket. The leads are dislodged, and ventricular pacing ceases. Subsequently, with continual reeling of the leads around the generator, the ipsilateral phrenic nerve may be stimulated, resulting in diaphragmatic pacing and the sensation of abdominal pulsations or hiccups3. Stimulation of the brachial plexus can also occur resulting in rhythmic arm twitching.

The risk factors for this condition include female gender, obesity, elderly age group, impaired cognition and a smaller-sized implanted device in relation to its pocket4. An associated increase in laxity of the subcutaneous tissues, particularly in elderly patients also facilitates dislodgement of device. chest X-ray is the simplest and most vital diagnostic tool to diagnose Twiddler's syndrome, as it is rapid and gives a clear image of the lead coiling and device rotation3.

Treatment of diagnosed cases include pocket reexploration, uncoiling of the lead, implantation of new leads and repositioning of the pulse generator5. As lax subcutaneous tissues permit easy device rotation, minimizing the pocket size, and suture fixation of the pulse generator with a ligature during implantation can also prevent the occurrence of Twiddler's syndrome6. Other techniques include active fixation of the transvenous leads with non-absorbable suture or use of a Dacron patch to promote tissue growth around the device for better fixation7. In an article by Fahraeus and Hoijer, the option of suturing the device to the deep fascia was reserved only for patients with mental disorders and lax subcutaneous tissue.

Despite stringent suturing procedures described above, proper patient education and counselling the caretakers, especially in elderly, remains the single most important means for avoiding PPM manipulations thereby preventing fatal consequences of Twiddler's syndrome.

CONCLUSION:

Twiddler's syndrome, a rare but potentially lethal complication of cardiac pacemaker treatment. It should be considered as a cause of pacemaker failure in an elderly patient presenting with bradyarrhythmias following pacemaker implantation. Simple imaging techniques like chest X ray can diagnose it. Active fixation of device leads should always be performed. Counselling against manipulating the pacemaker generator is the single-most important preventive strategy.

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Publications & Research Work 2018-19

Department of Academics & Research encourages scientific publications by Consultants / PG Students / Faculty members. In the year 2018-19 there were 16 International & 9 National publications in peer reviewed journals. Many of these have been presented in various National & International Conference and have won best paper award.





Publications in November & December 2019

Toxicity to immune checkpoint inhibitors presenting as pulmonary arterial vasculopathy and rapidly progressing right ventricular dysfunction

Dr P Sanzgiri, Dr Smriti Koppikar, Dr B A Krishna, Dr Pallavi Patil, Dr Charan Reddy Department of Nuclear Medicine, Department of Medical Oncology, LHRC Published in American Journal of Cancer Case Reports, October 2019

Acute Coronary Syndrome (ACS) in Polycythemia Vera: A Case Report with Review of Literature

Dr Abhishek Shah, Dr Charan Reddy, Dr Abhay Bhave, Dr Prakash Sanzgiri Department of Cardiology, Department of Hematology, LHRC Published in October 2019

Why is Acute Kidney Injury more demanding in terms of Nutritional Support?

Dr Hemant Mehta Department of Nephrology, LHRC Published in Journal of Renal Nutrition and Metabolism by Wolters Kluwer Medknow, December 2019

Opioid free onco-anaesthesia: Is it time to convict opioids? A systematic review of literature.

Dr Vaibhavi Baxi Department of Anaesthesia, LHRC Published in Journal of Anaesthesia & Clinical Pharmacology

Biologics in Psoriasis: Indian Experience

Dr S Parasramani Department of Dermatology, LHRC Published in Indian Journal of Drugs and Dermatology, January-June 2019

Real-World Experience on the Effectiveness and Tolerability of Apremilast in Patients with Plaque Psoriasis in India

Dr S Parasramani Department of Dermatology, LHRC Published in Indian Journal of Drugs and Dermatology, July-December 2019

Demystifying the death crystals (series of cases with death crystals)

Dr Ujwala Chavan Department of Pathology, LHRC Presented at Christian Medical College, Vellore Haemocytomorphometry Series CME 22nd and 23rd November 2019

Multimodality management, recurrence patterns, and long-term outcome of gasttroenteropancreatic neuroendocrine neoplasms: Progress over 17 years

Dr Gunjan Desai, Dr Prasad Pande, Dr Rajiv Shah, Dr P Jagannath Department of Gastroenterology, LHRC Published in Indian Journal of Gastroenterology, April 2019

Video Assisted Thoracoscopic Surgery (VATS) for all stages of Empyema Thoracis: A Single Centre Experience

Dr Ravikant Thori Department of General Surgery, Department of GI Surgery, Department of Respiratory Medicine, LHRC Published in Indian Journal of Surgery, November 2019

Coags in pregnancy editorial s13224-019-01290-8

Dr Abhay Bhave Department of Haematology, LHRC

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Spot the Diagnosis

CASE I

PATHOLOGY CELL SERIES I:

68 yr female came with complaint of fever since 20 days. Non hypertensive, Non diabetic.

On examination

Non toxic, Afebrile, no bleeding at any site No lymph node enlargement. CNS, CVS, RS - NAD PA - soft, non tender, No organomegaly.

Investigations

CBC: Hb - 8.6 gm/dl, TLC - 1000/cumm, Platelets - 26,000/cumm. Neutrophils - 9%, Lymphocytes - 85%, Monocytes - 6%

Bone marrow aspirate image. Identify the cells and condition?

Dr. Ujwala Chavan Clinical Associate - Pathology

CASE II

HISTOPATHOLOGY QUIZ

A 32 year female presented with complaints of headache, vomiting and seizures since 3 months. On investigation, CT brain showed a large hypodense lesion in right frontal lobe with mass effect and MRI showed a 6 X 5.5 X 4.2 cms, well defined mass insinuating right frontal lobe parafalcine, extending from vertex down to basal region. The lesion was involving corpus callosum with small contralateral extensions and significant mass effect with effacement of sulci and cisterns and compression of lateral ventricles. The patient was operated and multiple pearly white and thin membranous and pultaceous bits were received for histopathological evaluation.

Gross image:

Legend: Pearly white membranous and pultaceous bits

Microscopy:

Legend: Compressed stratified squamous lining with normal maturation and abundant keratin flakes.

Dr Prachi Nayak Dr Chandralekha Tampi





Kindly email us your answers on medicaltimes@lilavatihospital.com

ANSWER FOR CASE I:

Trypanosomiasis

ANSWER FOR CASE II:

A 33 yrs old man presented with a corn on his foot since 6 months. He had removed it once, but it had recurred. Can you guess the diagnosis?

SPOT ANSWER - Deep Palmoplantar Wart (HPV related Viral lesion) Also known as Myrmecia

DISCUSSION :-

This is a hyperkeratotic viral lesion occurring on palms or soles and clinically it resembles the common corn. Sometimes these corns conceal the underlying lesions like virus induced proliferations and rarely even Squamous cell carcinomas.

- HPV related viral warts are caused by the Human Papillomavirus, a DNA virus. Over 200 different HPV genotypes have been identified and this genetic heterogeneity is reflected in different clinical presentations. HPV 16, 18, 31, 33, 35, 38, 45, 51, 55, 56, 58, 59, 66, 68 can cause cancers, while HPV 1,6, 11, 40, 42, 44, 54, 60,63, 65, 71, 72 and 84 causes benign warts.
- HPV viral infections range from no evidence of disease, harmless warty lesions, Head and neck squamous cell papillomas and carcinoma and cervical and anogenital warts and cancers.
- HPV virus infects the basal squamous epithelial cells usually through a small break in the skin or mucosa.
- These warts are contagious, and may spread through autoinoculation, by infecting nearby skin or by walking on infected surfaces, like common wash room, swimming pools etc.
- Clinical and histologic evidence of HPV infection usually develops 1 to 8 months after initial exposure. Untreated disease can regress spontaneously but some progress to cancer.
- Deep palmoplantar warts are benign and are associated with HPV 1 infection but can also be seen with HPV -60, 63 and 65 infections. Some of them can be pigmented.

CLINICAL SIGNIFICANCE:

Corns should be evaluated histopathologically as some of them are actually viral induced proliferations.

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Guidelines Speak

This section highlights newer / updated guidelines published for better patient care and could be practice changing

1. Title : Clinical Excellence Commission, 2018, Guidelines on Perioperative Management of Anticoagulant and Antiplatelet Agents

Link: http://www.cec.health.nsw.gov.au/



Corporate and Community Outreach Programs



Thalessemic Patient Support Group Gathering on Living with Thalessemia





Blood Donation Camp at Star Shipping Services India Pvt Ltd & Zim Shipping Services India Pvt Ltd



Free Physiotherapy Camp





Health Talk by Dr. Snehal Kothari at HPCL



Health Talk on Basic Life Support, AED First Aid Training and Blood Borne Pathogens at Honeywell Automation India Ltd.



Health Talk by Dr. Ritesh Agarwal for Saksham Group on Thyroid and Hormonal Disorders

Few Honorable Mentions



- Dr. Prahlad Prabudesai, Consultant Chest Medicine, Dr. Rajeev Redkar, Consultant Pediatric Surgery and Dr. Rajesh Maniar, Consultant – Orthopedic Surgery were honoured as "The Distinguished NBE Teacher" in recognition for their ongoing commitments & dedicated teaching by Association of National Board Accredited Instituitons, Mahahrashtra, Gujarat, Goa region.
- Dr. Achal Gupta, DNB Trainee Neurosurgery was awarded BEST PAPER PRESENTATION on "Implications of carotid-vertebro-basilar anomaly" at the 4th Annual Conference Society of Neurovascular Intervention: SNVICON 2019.
- Dr. Rajeev Redkar Editor in Chief of the First ever Indian textbook of Paediatric Surgery by the Indian Association of Paediatric Surgeons.
- Dr. Chandralekha Tampi, MD, Head of Dept. Surgical Pathology received REVIEWER CERTIFICATE from the Indian Journal of Pathology & Microbiology for outstanding contribution.
- Dr. Chandralekha Tampi, MD, Head of Dept. Surgical Pathology has been invited to be a member of the editorial board of the prestigious Indian Journal of Pathology and Microbiology, (IJPM).



Educational Activities

Our doctors share their intellectual capital and expertise with others through CMEs using means like workshops, seminars, conferences, live telecast of procedures and surgeries, which they are performing. Our hospital has been accredited by Maharashtra Medical Council for conducting Continuing Professional Development (CPD).

No.	Торіс	Department
1	Cystic Fibrosis	Pediatrics
2	Aesthetic Rhinoplasty	ENT
3	CPD on Current Concepts In Infectious Diseases (CCID 2019)	Internal Medicine
4	Optical Coherence Tomography	Cardiology
5	DNB Pediatrics OSCE	Pediatrics
6	Spinal Surgery	Orthopedic
7	Pediatric Endocrine	Pediatrics



Cystic Fibrosis



Aesthetic Rhinoplasty



Spine Surgery



CPD on Current Concepts In Infectious Diseases (CCID 2019)



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It consists of a bath tub in which oxygen-rich air, bubbles into the temperature controlled water.

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The natural power of water and oxygen stimulates natural collagen production. This makes the skin firm and elastic, and delays development of wrinkles and gives skin a fresh and young look.

It is very suitable for people with dry skin and makes the skin supple and moisturizes it in a gentle, natural way.

The oxygen bubbles are so small that they remain below the water surface and linger. They hold the heat of the water, so that the bath hardly cools down while you enjoy your oxygen session.

The air bubbles that are blown into the water are negatively charged, have a positive impact on your mind and body, because they stimulate the production of serotonin, which neutralizes the free radicals and strengthen the immune system.

BENEFITS

1. Deep Cleansing of the Skin

Hydrotherapy cleans deeper than cosmetic treatments. The water contains oxygen-rich air bubbles that are so small that they can penetrate deep into the pores. The air bubbles remove all impurities, leaving your skin feeling silky soft after every bath.

2. The Skin Feels and Looks Younger

The tiny air bubbles carry oxygen deep into the skin and stimulate the natural production of collagen thus making skin looking fresh and young in appearance.

3. Relieves the Symptoms of Skin Conditions

People with dry skin see their symptoms alleviated considerably by Hydrotherapy. This is because the bath only uses water and oxygen, which makes the skin supple and hydrates it in a soft, natural way.

4. Only Oxygen & Water

Hydrotherapy is only pure water and air bubbles without additives. So you can use the hydrotherapy bath as often as you want, your skin will always be full of health and feel just as soft.

5. Longer Hot Water

The small air bubbles always hang under the water surface, so they retain the heat of the water. Water will barely cool down while you are bathing.

6. Neutralizes Free Radicals

The air bubbles that are blown into the water are negatively charged having a beneficial effect on body and mind, because they stimulate the production of serotonin which is your happiness hormone. Thereby strengthening your immune system.

7. Slightly Bubbling Sensation

Feel reborn from head to toe, because with tiny bubbles from Hydrotherapy gives you a slightly sparkling sensation. Enjoy a nice relaxing bath, let your mind relax and get out with a silky, healthy skin.

Straight from the Heart - Patient Testimonials

Bhushan Salunkhe

Overall experience with doctors & response was good. Whole process was systematic & organised. Customer Care Staff are very quick & cooperative.

Shweta Patel

The system which is accurate detailed and pin-pointedly focused for the patient care for medication & recovery

Celine Dyas

The open & spacious floor lobbies which provides a relaxful atmosphere for both patients & care givers.

Suneel Rastogi

I like the promptness of doctors. They have given the clarity of surgery & procedure properly.

Rajneeta Kademni

I like: Top-notch and ultra modern equipments and machinery, Ambience, Concern shown by the staff

Radhika Chavan

There is a systematic process and that is the best part. Doctors are very pleasant and the staff are also good

Philip Almeida

Excellent time management. All test covered within stipulated time.



Neo-Natal Intensive Care Unit (NICU)

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Bariatric Surgery Cardiothoracic Surgery Cochlear Implant Surgery Colorectal Surgery Diabetic Foot Surgery Endocrine Surgery ENT and Head & Neck Surgery Gastro Intestinal Surgery **General Surgery** Gynecology, Obstetrics & IVF Minimal Invasive Surgery (Laproscopic Surgery) Neuro Surgery Onco Surgery Ophthalmology Orthopedics, Sports Medicine Pediatric Surgery Plastic & Reconstructive Surgery Spine Surgery Transplant: Cardiac, Corneal, Kidney & Liver Urology, Andrology Vascular Surgerv 24 HRS IMAGING CT Scan Interventional Radiology

MRI Non Invasive Cardiology CATH Lab Sonography X-Ray

CRITICAL CARE

Intensive Care Unit (ICU) Intensive Cardiac Care Unit (ICCU) Paediatric Intensive Care Unit (PICU) Paralysis & Stroke Unit Surgical Intensive Care Unit (SICU) Audiometry EEG / EMG Health Check-up BMD Mammography Nuclear Medicine PET & SPECT CT Scan Urodynamics 24 HRS LABORATORY SERVICES Blood Bank Histopathology Microbiology Pathology Ambulance Emergency Pharmacy Roshni Eye Bank HYDROTHERAPY CENTRE

Benevolence

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. Various social activities such as free OPD, services to senior citizen, sending mobile vans to Adivasi areas to organize free health check-up camps, free camps are undertaken as an on-going process. The Roshni Eye Bank managed by Lilavati hospital is a well-equipped comprehensive centre for cornea removal, processing, storing, supplying and corneal transplantation.

Under this service Lilavati Hospital & Research Centre offers:

- Free OPD
- Health Check up Camps at Nana Nani Parks
- Mobile Clinic
- Roshni Eye Bank

BENEFICIARIES for F.Y 2018-2019				
Free OPD	18,991			
Mobile Clinic	16,192			

Key Medical Equipments Installed In Recent Past

Equipment name	Department	Company
Cardiac CathLab System	CathLab	Philips BV – Netherlands
St.Jude Optis Mobile HD-OCT System	CathLab	St Jude Abbott USA
Radial Artery stabilization system	CathLab	Adept Medical - USA
Portable Ultrasound system	CathLab	GE Healthcare – USA
Digital Mammography system with Tomosynthesis	Radiology	Hologic Inc USA
Neuro Surgical 3D-HD Operating Microscope	Main OT	Carl Zeiss GmBH Germany
Harmonic Scalpel/Vessel Sealing device	Main OT	Johnson & Johnson – USA
High intensity operating Headlights	Main OT	Luxtec Inc – USA
Anesthesia Delivery system with ET control	Main OT	GE Healthcare – USA
Heart & Lung Machine with Heater Cooler	Main OT	Sorin – Germany
Image-1 HD Laproscopy Camera System	Main OT	Karl Storz GmBH – Germany
Craniotomy system	Main OT	Aesculap GmBH – Germany
3D-HD Laproscopy Camera System	ObyGyn OT	Karl Storz GmBH – Germany
Portable 2D-Echo System with TEE	Cardiology Lab	GE Healthcare – USA
7-Day Holter/Event Recorders	Cardiology Lab	Motara Inc – USA
Gene-Expert Tb/Molecular testing system	Molecular Lab	Cephied Inc – USA
190-series HD Flexible Endoscopy system	Endoscopy	Olympus Corporation – Japan
68-Channel Sleep Lab System	Sleep Lab	Philips Inc – USA
4-Channel EMG/EP System	Neurology	Nicolet Inc – USA
BERA (Brain stem evoked response) System	ENT OPD	GSI Audera – USA
Ultra Low temperature Plasma Freezer	Blood Bank	ThermoFisher – USA
Hand Held Fundus Camera	Opthal OPD	Carl Zeiss GmBH – Germany
Vein Finder Device	ICU/Wards	Accuvein – USA
Transport Ventilators	ICU/ICCU	ResMed – USA
Chest Compression Device	Emergency/ICCU	Schiller AG – Switzerland
Automated Ankle Brachial Index monitor	OPD	MESI Medical – Slovenia
WatchPAT Sleep Apnea testing unit	Sleep Lab	Itamar Medical – Israel
CoaguChek INR monitor	Floor Wards	Roche diagnostics



Important Telephone Numbers

Toll Free	18002678612
Boardline	022-68658000 / 68651000
Hospital Fax	+91 22 2640 7655
TPA Fax	+91 22 2640 5119
Emergency / Casualty	8063 / 8064
Admission Department	8080 / 8081 / 8082
AKD Counter	8650 / 8651
Appointment - OPD	8050 / 8051
Ambulance	+91 9769250010
Billing - Inpatient	1586
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	8019 / 8078
Dermatology / Hydrotherapy	8020
EMG / EEG	8249 / 8250
Endoscopy	8057
ENT / Audiometry	8232
Health Check-up Department	8354 / 8356
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	8030
TPA Cell	8089
Transplant Co-ordinator	8362
Urodynamics	8021
Visa Section	8248 / 8244
X-Ray, Sonography Department	8031

Doctors Associated with Lilavati Hospital

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 Satyan Ms. Gorawara Pooja Ms. Mallapur Shruti Ms. Parulkar Bakul Ms. Satam Sneha **Bariatric Surgery** Dr. Shah Shashank **Blood Bank** Dr. Saraswat Shubhangi **Cardiovascular & Thoracic Surgery** Dr. Bhattacharya S. Dr. Chaudhri Babar Dr. Honnekeri Sandeep T. 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. Ballani Prakash Dr. Bang Vijay Dr. Dargad Ramesh R. Dr. Gokhale Nitin S. Dr. Jhala Darshan Dr. Kothari Snehal N. 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 Brian

Dr. Pinto Robin Dr. Punjabi Ashok H. Dr. Rao Anand Dr. Ratnaparkhi Gajanan Dr. Samuel K. Mathew Dr. Sanzgiri P. S. Dr. Shah Chetan Dr. Suratkal Vidya Dr. Vijan Suresh Dr. Vyas Pradeep R. Dr. Vora Amit Dr. Vaiifdar Bhavesh **Chest Medicine** Dr. Chhajed Prashant Dr. Mahashur Abha Dr. Mehta Sanjeev K. Dr. Prabhudesai P. P. Dr. Parkar Jalil D. Dr. Rang Suresh V. **Cochlear Implant Surgery** Dr. Dhingra Preeti **Colorectal Surgery** Dr. Chulani H. L. **Dentistry / Dental Surgery** Dr. Bhavsar Jaydeep P. Dr. Deshpande Dilip Dr. Joshi P. D. Dr. Khatavkar Arun Dr. Kamdar Rajesh J. Dr. Parulkar Darshan Dr. Sanghvi Sameer Dermatology Dr. Goyal Nilesh Dr. Mehta Nimesh Dr. Oberai Chetan Dr. Parasramani S. G. **Diabetic Foot Surgery** Dr. Rege Tushar Diabetology Dr. Panikar Vijay **Diabetology & Endocrinology** Dr. Joshi Shashank R. **ENT Surgery** Dr. D'souza Chris E. Dr. Jayashankar Narayan Dr. Parasram Kamal S. Dr. Pusalkar A. **Endocrine Surgery** Dr. Agrawal Ritesh **Endo Urology** Dr. Utture Anand **Gastro Intestinal Surgery** Dr. Bharucha Manoj Dr. Kulkarni D. R. Dr. Mehta Hitesh Dr. Shaikh Taher Dr. Varty Paresh

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Dr. Joshi Anant

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- Management of Jaundice, Acute Liver Failure & Chronic Liver Diseases
- Dedicated Liver Intensive Care Unit (LICU)
- State-of-the-Art Diagnostic & Therapeutic Facilities for Endoscopy and Liver / Bile Duct / Pancreatic Surgery

For appointment & details contact Sr. Organ Transplant Coordinator Call: +91-9769840408 / +91-9833252410 / 022-68658000 Email: organtransplantcoordinator@lilavatihospital.com OPD Days: Tues / Thurs / Sat • Time: 12:00 noon to 4:00 pm

Liver Transplant Surgeons

Dr. Naimish Mehta, Dr. Taher Shaikh

Hepatologists & Gastroenterologists

Dr. Aniruddha Phadke, Dr. Jayant Barve, Dr. Mehul Choksi, Dr. Samir Parikh, Dr. Soumil Shah



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A-791, Bandra Reclamation, Bandra (W), Mumbai - 400 050. **Tel.:** +9122-6865 8000, +9122-6865 0600 **Email:** info@lilavatihospital.com • **Website:** www.lilavatihospital.com