IMPORTANT TELEPHONE NUMBERS

Emergency / Casualty :	**2656 8063 / 2656 8064**
Ambulance :	97692 50010
Hospital Board Line :	022-2675 1000 / 2656 8000
Hospital Fax :	022-2640 7655 / 2640 5119
Admission Department :	2656 8080 / 2656 8081 / 2656 8082
TPA Cell :	2656 8089
Appointment-OPD :	2656 8050 / 2656 8051
Billing-Inpatient Department :	2656 1586 / 2656 1585
Billing-OPD Department :	2656 8052 / 2656 8053
Blood Bank Department :	2656 8214 / 2656 8215
Health Check-up Department :	2656 8355 / 2656 8354
Report Dispatch Counter :	2675 1620
MRI Department :	2656 8066
X-Ray, Sonography Department :	2656 8031
CT Scan Department :	2656 8044 / 2656 8045
Physiotherapy Department :	2675 1536 / 2675 1698 / 2675 1699

Lilavati Hospital and Research Centre

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LILAVATI HOSPITAL MEDICAL TIMES

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LILAVATI HOSPITAL
MEDICAL TIMES

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EDITORIAL...

My journey of being a medical professional is not just a realization of my dream; I regard it as a blessing by which I am able to have an association with the people who are in need and are cured, who return back home with gratifying feeling; feeling of being in safe hands, a feeling of being healthy. Today When I connect with you all through this editorial column I feel much closer to the beyond belief world of literature. Transcripting my feelings, thoughts, and my ideas in words and articulating them for you with the sense of passion is an absolute delight.

For me getting associated with Lilavati Hospital Medical Times (LHMT) is a great opportunity and I am indebted to all the people who passionately have stood up in the past to take the medical times to the next level and I am sure their support and wishes will always be with us.

Indian Health care system is process improving health care system, and we are trying hard as country to meet all expectation to have enough hospitals, doctors, medical staff, medicines or ambulance services for the nation. We of course have the best of medical professionals. The field of Medical Science has come a long way and require a lot of brushing before we catch up with the first world medical system. The possession of good health is the biggest asset and we at Lilavati Hospital make ongoing effort in creating such for everybody. India initiated its health care reform journey a few years back, this journey needs to gain momentum; we need fast reforms and systems in place. What other nations have achieved in three-four decades needs to be achieved by us in much lesser time here.

This edition of LHMT includes the feature on Dermatology, Evolution of Medical Science - highlighting history of Anaesthesia, presentation on case reports on Gynaecology & Obstetric, Nephrology, Nuclear Medicine, Orthopedic Surgery and Pain management, Radiological images of the month, details on our upcoming Global Update on Pain, our educational activities including CME programmes conducted in the recent past.

We have been fortunate to have benefited from the guidance of several experts of Lilavati Hospital; their valuable inputs have shaped up our thinking and we expect the same support and guidance from them in our endeavor. Our aim is to outline possible vision for LHMT in coming times. I fully expect LHMT to grow at a steady pace during the next coming years and look forward for your involvement to a greater extent.

Dr. Sanjeev Mehta

OVERVIEW: LILAVATI HOSPITAL & RESEARCH CENTRE

Late Shri Kirtilal 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 settled by late Shri Kirtilal Manilal Mehta. The Trust has engaged in innumerable charitable endeavors across India.

Late Smt. Lilavati Mehta

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

Chairman

Justice (Retd.) J. N. Patel

and

Trustees

Smt. Charu K. Mehta
Smt. Rekha H. Sheth

LILAVATI HOSPITAL & RESEARCH CENTRE

Lilavati Hospital & Research Centre is a premier multi specialty tertiary care hospital located in the heart of Mumbai, close to the domestic and the international airport. It encompasses modern health care facilities and state of art technology dedicatedly supported by a 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 Health Care, Human Care". Being a centre of medical excellence where technology meets international norms and standards, the hospital has got what it takes to be the pioneering quality healthcare institute and hence is 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.

OVERVIEW: LILAVATI HOSPITAL & RESEARCH CENTRE

HIGHLIGHTS

- 314 bedded hospital including 72 intensive care beds.
- 12 state-of-the-art well equipped operation theatres.
- Full fledged Dental & Dermo cosmetology clinic.
- Modern Cathlabs having specialized SICU & ICCU with highly trained cardiac care medical staff.
- One of the highest nurses to patient ratio in India, which allows patient care in a more prudent manner.
- Lilavati Kirtilal Mehta Medical trust is an approved research organization by Ministry of Science & Technology having all modern facilities necessary for conducting research.
- More than 300 consultants and manpower of nearly 1,800.
- Hospital attends to around 300 In-patients and 1,500 Out-patients daily.

LATEST ADDITIONS

Lilavati Hospital has always striven to provide the best in health care to patients and is always in the front to adopt the latest technology available to its repertoire.

- ***SOMATOM Definition Flash - CT SCAN***
- ***3 Tesla MRI with latest Philips Ingenia having digital technology***
- **Philips Allura Clarity FD10 Low Dose Cathlab**

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 health care to the sick people. The research centre have 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 aims 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.

LILAVATI HOSPITAL TODAY

DEPARTMENT IN FOCUS-DERMO-COSMETOLOGY

Our Dermo-Cosmetology clinic is one of its kind where dermatology and cosmetology have been amalgamated in a hospital set up.

Signs of ageing are more evident on face due to exposure to sun, wind, pollution and excessive heat or cold. Other factors that can accelerate facial ageing are hormonal changes, depleted collagen production, thinning of skin due to free radical damage, facial bone changes and slacked facial ligaments, improper diet, exercise and smoking.

Face rejuvenation consists of noninvasive to minimally invasive treatments to reduce facial imperfections. The most successful approach is the use of combination of procedures and treatments.

LASER TONING

It is carried out with the help of Medlite C6 laser.

It stimulates the collagen production which imparts firmness to the elastic tissue and improves the skin tone. It also decreases the pore size, reduces the pigmentation and resurfaces the scars. It completely rejuvenates your face to get back the youthful glow.

This is a lunch hour procedure without any downtime.

RADIOFREQUENCY

Collagen production is increased and the facial skin is tightened. This gives firmness to the skin & improves its tonicity. Combination with laser toning gives better results.

MICRODERMABRASION (SKIN POLISHING)

This helps to exfoliate dead skin and reduce open pores, acne scars and uneven skin tone.

CHEMICAL PEEL

Glycolic peel, Nomelan peel, TCA peel and salicylic acid peel are the different types of peel carried out as per requirements of the patients.

FILLERS

Dermal fillers restore volume and fullness to the skin to correct moderate to severe facial wrinkles and folds such as nasolabial folds, lip augmentation and scars.

DEPARTMENT IN FOCUS-DERMO-COSMETOLOGY

TATTOO REMOVAL

Different colored tattoos can be removed with our multi-wave length laser without the risk of scaring.

Medlite laser removes tattoo whilst leaving the surrounding skin unharmed. Only cream anesthesia is required. Pigmented lesions like nevi (mole), age spot, liver spots, freckles, Birth marks (cafe-au-lait spot, nevus of ota, Becker's nevus, Giant melanocytic nevus) can be easily treated without risk of scaring or causing depigmentation. After few treatments skin returns to almost normal colour. Vascular lesions like Port wine stains (PWS), haemangiomas and telangiectasia can be treated using either Medlite C6 laser or Cool glide excel (cutera) or both together in combination to achieve exvellent results.

BOTOX

Botox is the most popular wrinkle reduction treatment. It is a simple non-surgical procedure that smoothens the deep persistent facial lines by relaxing the tiny facial muscles that cause expression lines.

DAAVLIN PHOTOTHERAPY

The unit consists of both UVA (ultraviolet) and UVB system.

It is useful for treating cases of Psoriasis, Vitiligo, atopic dermatitis, seborrheic dermatitis, uraemic pruritus, pruritus due to cholestatic jaundice and few more conditions **Targeted photo therapy for localised lesion is also available.**

Warts, skin tags, Xanthelesma, DPN, corns, seborrheic keratoses, small basal cell epitheliomas, actinic keratoses, sebaceous hyperplasia etc can be easily treated using either CARBON DIOXIDE LASER, CONMED HYFERCATOR, RADIO FREQUENCY MACHINE OR CRYOSURGICAL UNIT.

Fractional CO2 laser is available to treat acne scars, post-operative atropic scars, post chicken pox scars, to tighten the skin.

DEPARTMENT IN FOCUS-DERMO-COSMETOLOGY

LASER HAIR REDUCTION (LHR)

LHR is done with cool-glide Excel-Cutera a US-FDA approved, long pulsed ND YAG Laser. Cutera is a safe, efficient laser specifically suited for the Indian skin.

EVOLUTION OF MEDICAL SCIENCE

HISTORY OF ANAESTHESIA

Dr. Vaibhavi Baxi, *D.A. F.C.P.S DNB*

The modern anaesthetic era is just over hundred and sixty years old. Successful anaesthesia for surgery was first demonstrated in 1846. Before that, the few operations that were possible were carried out either with no pain relief or after a dose of opium and / or alcohol.

There were many attempts to relieve pain throughout the centuries. Early examples include loss of consciousness produced by blows to the patient's head or by compression of the carotid arteries (in the neck). In the middle ages, elaborate potions included alcohol and various plant extracts, such as mandrake root. Opium was widely used, particularly in China. Pain relief in an arm or a leg was produced by squeezing the nerves in the upper part of the limb and also by applying cold water, ice, or snow. Hypnotism became popular as a means of pain relief and medical treatment during the late 18th and early 19th centuries.

Liston, an eminent surgeon, was once operating for a bladder stone. The panic stricken patient finally broke loose from the brawny assistants, ran out of the room, down the hall and locked himself in the lavatory. Liston, hot on his heels and a determined man, broke down the door and carried the screaming patient back to complete the operative procedure.

Before the advent of anaesthesia, surgery was a terrifying last resort in a final attempt to save life. (Fig. no. 1) Few operations were possible. Surface surgery, amputation, fungating cancers and 'cutting for stone' (the removal of bladder stones) were really the only areas in which the surgeon could practice. The inside of the abdomen, chest and skull were essentially 'no go' areas. Speed was the only determinant of a successful surgeon. Most patients were held or strapped down - some would mercifully faint from their agony - many died either on the table or immediately post-surgery. The suffering was intense.

The introduction of anaesthesia changed all of this. Surgery could slow down - became more accurate and could move into 'forbidden areas' of abdomen, chest and brain. The evolution of surgical practice has been dependent on anaesthesia and the concomitant introduction of antisepsis through Lister's carbolic spray.

The earliest reference to anaesthesia by inhalation is contained in the works of Herodotus, who states that the Scythians produced intoxication by inhaling the vapour of a certain kind of hemp, which they threw upon the fire or upon stones heated for the purpose. This was probably Cannabis indica (or Indian hemp). In the 15th century the method for producing insensibility to pain was that of inhalation of the volatile principles of drugs, which had been handed down by tradition. We find from the history of the Egyptians, Chinese, Greeks and Hindus that mandragora and Indian hemp were the chief drugs of anaesthetic value.

Joseph Priestley's demonstration in 1767 that certain gases could be absorbed and compressed in water, led to the introduction of aerated waters; carbonic acid gas being the first given. Priestley also discovered nitrous oxide in 1776 and in 1798 he eased an aching tooth by inhalation of nitrous oxide gas.

Alcohol was used as an anaesthetic in 1842 by Robert Collier, a scientist of New Orleans. He observed the actions of a plantation worker, who while stirring a vat of rum, became unconscious, fell and broke his hip. This Collier reset and the worker declared that he felt no pain during the process.

HISTORY OF ANAESTHESIA

The glory for the discovery of modern anaesthesia is shared by three men. The world is indebted to Horace Wells for nitrous oxide gas; to W. T. G. Morton for ether; and Simpson for chloroform.

On December 11, 1844, Horace Wells was present at an exhibition of the effects of nitrous oxide gas given by a young scientific lecturer named Colton. Impressed by the gas Wells proceeded to test the anaesthetic effect on himself. Being troubled with a raging toothache, he inhaled the gas and had it extracted by another dentist named Riggs. After further successful trials, Wells went to Boston, where assisted by Morton, he gave in the presence of a number of medical practitioners and students an exhibition of -"painless tooth pulling," under the influence of nitrous oxide gas. But the experiment on this occasion, as Wells himself confesses, was not quite a success; the gas bag having been removed too soon. The whole thing was denounced and Wells was hissed out of the room as an imposter.

W. T. G. Morton on September 30, 1846 experimented on himself by inhaling sulphuric ether through a saturated handkerchief. He appealed to the senior surgeon at the Massachusetts General Hospital, and obtained permission to test the anaesthetic on a patient about to undergo a surgical operation. On Friday, October 16, at the appointed time the amphitheatre was full. Morton administered the ether successfully and the operation, which was for a congenital vascular tumour of the neck, of a young man named Gilbert Abbott, was completed in about five minutes without a single groan. (Fig. no.2)

Dr. Oliver Wendell Holmes suggested the name "anaesthesia" for the condition and "anaesthetic" for the agent; which names has since been in general use.

Sir James Young Simpson was the first physician to use chloroform after successful self experimentation just one year after the established use of ether. On November 10, 1847, Dr. Simpson communicated his discovery to the Medico-Chirurgical Society of Edinburgh in a paper, "A New Anaesthetic as a Substitute for Sulphuric Ether." On November 15, 1847, chloroform was used for the first time for a surgical operation in the Edinburgh Royal Infirmary. Three patients were operated on successfully under its influence.

Karl Koller, of Vienna, in 1884, demonstrated the effects of cocaine as a local anaesthetic. The alkaloid now known as "cocaine" was isolated as far back as 1855 by Gadeke. Such an anaesthetic was of great importance and came into general use at once. It was of especial use for ophthalmic operations and in painful conditions of mucous surfaces and minor operations. In New York in 1885, Dr Corning gave the first spinal anaesthetic and then the first epidural anaesthetic in 1901. Newer, less toxic, local anaesthetic agents were introduced in the early 1900's.

The next important innovation was the control of the airways with the use of tubes placed into the trachea. This permitted control of breathing and techniques introduced in the 1910's were perfected in the late 1920's and early 1930's. Then came the introduction of intravenous induction agents. These were barbiturates which enabled the patient to go off to sleep quickly, smoothly and pleasantly and therefore avoided any unpleasant inhalational agents. Then in the 1940's and early 1950's, there came the introduction of muscle relaxants, firstly with curare (the South American Indian poison!) and then over subsequent decades a whole series of other agents. In the 1950's, the investigation of halogenated hydrocarbons as nonflammable, highly

HISTORY OF ANAESTHESIA

potent anaesthetic agents resulted in the introduction of halothane and the disappearance of ether and chloroform from most operating rooms.

In the 1960's, with the development of new drugs and the availability of new monitoring techniques and equipment there was a beginning of a new era of anaesthesia. With sophisticated monitoring systems and a greater understanding of bodily functions anaesthetists began to look more closely at safety and refinement of techniques. Surgery was extended to increasingly complex procedures on patients who might previously have been denied operations of the basis of age or illness.

The end of the 20th century saw major advances in everyday anaesthesia, including the contributions of computer technology, microelectronics, and advances in drugs. Anaesthesia is now tailored to each individual patient, no matter if you are ten weeks premature or a hundred years old. Whether you are sick or well, there has never been a safer time to undergo anaesthesia.

Fig. No. 1: Horrors of Pre-Anaesthetic era

Fig. No. 2: WTG Morton demonstrating ether anaesthesia in Massachusetts General Hospital.

CASE REPORT: GYNAECOLOGY & OBSTETRIC UNUSUAL OBSTETRIC COMPLICATIONS REFERRED TO LILAVATI HOSPITAL FOR TERTIARY CARE AND SUCCESSFUL MANAGEMENT

Dr. Kiran Coelho, *M.D, DGO, DFP,* **Dr. C J Thakker,** *M.S (Ortho), D.N.B,* **Dr. Hemant Shintre,** *DGO*

CASE REPORT I

Rent in the Vent: A Rare Event

Parturition- Induced Rupture of Pubic Symphysis & Dislocation of Sacroiliac Joint after Spontaneous Vaginal Delivery

INTRODUCTION

Rupture of pubic symphysis is an uncommon event after vaginal delivery. Reported incidence varies from 1 in 300 to 1 in 30,000 deliveries. While a mild diastasis of the pubic symphysis (i.e., less than 10mm) is considered to be physiological in pregnancy & is thought to be caused by the excess production of the hormone relaxin during pregnancy, greater separation can lead to tenderness on palpation and disability to ambulate.

Patients experiencing pubic symphysis diastasis notice pubic bone pain while standing, walking, climbing stairs, or rolling over in bed (generally any time a pregnant woman moves her knees or legs apart). These motions result in the pelvic joint shifting on one side more than the other, causing severe pain localized in the middle of the pubic bone area directly above the mons pubis (the area where pubic hair grows).Patients may also notice pain in the lower back, hips, and / or buttocks because the sacroiliac joints (located in the back of the pelvis) are also affected by the pregnancy hormone relaxin. Diastasis of >2.5 cm represents ligamentous damage at sacroiliac (SI) joint.

Factors that contribute to a rupture of pubic symphysis are rarely defined. Nevertheless, it seems clear that multiparity, macrosomia accompanied by cephalopelvic disorder, McRoberts maneuver, forceps, maternal connective tissue disorders, prior pelvic trauma, and hyperflexed legs may predispose to pubic symphysis diastasis.

Diagnosis can be confirmed rapidly by pelvic X-ray. Additionally, MRI serves to exclude soft tissue injury. However, there is no consensus on the optimal therapy. Typically, a conservative treatment is performed comprising pelvic girdle, analgesia, bed rest in lateral decubitus, and physical therapy. In cases of extreme pubic symphyseal rupture with pelvic instability or persistent pain after conservative therapy, operative treatment is a successful alternative method, which has been reported in several cases.

CASE REPORT

A 26 years old P1L1 who delivered at other hospital 2 days back was referred to our tertiary care hospital with complaints of immediate severe pain in pubic & suprapubic area after delivery and inability to sit, stand and walk because attempts to move legs were associated with extreme pain in pubic, suprapubic area & also in lower back and both hips. Patient is not short statured (height - 173 cm) & not obese (weight - 74 kg). The patient had no previous medical or surgical history. Her antenatal course had been uncomplicated.

Two days before term, patient was admitted in the outside hospital in prelabour. Pelvic adequacy was confirmed on per vaginal examination. She started having mild uterine contractions after 8 hours of admission and after normal progression of first stage of labour, a shoulder dystocia occurred. By performing mediolateral episiotomy, McRoberts maneuver and suprapubic manual pressure, baby was delivered. The newborn had birthweight 3.11 kg, a length of 48 cm and a cranial circumference of 33.5 cm. Baby had APGAR score of 7/10 and 10/10 at 1 min and 5 mins postpartum consecutively.

CASE REPORT I: RENT IN THE VENT: A RARE EVENT

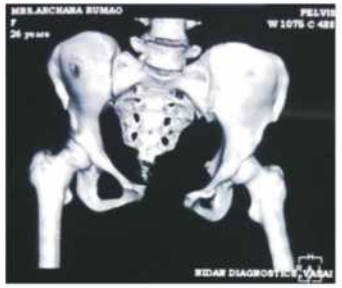
Immediate postpartum, the mother developed strong suprasymphysial pain and was unable to move her legs as any movement resulting into severe pain. On the physical examination the patient had a painful and palpable dehiscence of the pubic symphysis. Pelvic horizontal instability was identified but no sign of vertical instability. There were no symptoms of active bleeding or lesions of urinary tract or neurologic deficits. In addition, a pelvic X-ray revealed a pubic symphysis separation of 54 mm with left sacroiliac joint dislocation i.e. open book type of pelvic fracture. This gap is showninFigure1(a).The CT scan, shown in Figures 2(a) and 2(b), confirmed open book type of pelvic fracture i.e. pubic symphysis rupture alongwith dislocation of the left sacroiliac joint.

1(a)

1(b)

Figure 1 : X-ray of the pelvis with pubic symphysis separation and left sacroiliac joint dislocation(a). X-ray of the pelvis after surgical fixation of the pubic symphysis and sacroiliac joint (b)

All blood investigations were done and were found normal except "Total 25-hydroxy vitamin D" levels were found low (7.09). USG (abdomen + pelvis) revealed no significant abnormality. X-rays and CT-scan were reviewed by senior radiologists and orthopaedician and reported similar findings.



2(a)

2(b)

CASE REPORT I: RENT IN THE VENT: A RARE EVENT

CASE REPORT I: RENT IN THE VENT: A RARE EVENT

Figure 2: CT scan pelvis-3D imaging showing pubic symphysis separation with sacroiliac joint dislocation (a). Axial image showing pubic symphysis separation (b)

Starting therapy with a pelvic binder, bed rest, and analgesia, the patient underwent closed reduction and internal fixation by means of percutaneous anterior internal fixator (titanium pedicle screws and rods) and sacroiliac screw (titanium)under C-arm guidance on the sixth postpartum day. The patient received physical therapy to ambulate and patient could walk with the help of walker on the 3rd post-operative day. Patient was discharged on the fifth postoperative day.After 2 weeks the patient was able to ambulate without complaints and to take care of her child. A post-operative radiographic control determined the correct position of the implant,which can be seen in Figure1(b).

DISCUSSION

Although the initial clinical examination and diagnostic investigation are straightforward, the optimal way of treating a peripartum pubic symphysis rupture is discussed controversially. Several reports have shown that a conservative therapy is a reasonable approach.[1-2,9-12] Even in cases of large symphyseal ruptures measuring 5cm, 8 and 9 cm including iliosacral joint rupture[7] a successful conservative therapy has been reported. However, other works have demonstrated the limitations of a conservative treatment. For instance, Kharrazietal.[4] presented four cases of pelvic and sacroiliac joint rupture after vaginal birth; in those women undergoing conservative therapy, posterior pelvic pain remained for more than two years. In addition, Rommens[14] reported three cases of postpartum pubic symphysis rupture with persisting pain after conservative therapy. Those patients did not recover completely until they were operated by an open reduction and internal plate fixation. Niederhauser et al.[3] demonstrated a similar case; after a symphyseal rupture of 60mm occurring in a spontaneous vaginal birth with shoulder dystocia, conservative treatment failed to provide an optimal outcome. A 25mm gap was still present after 3 months and pain also persisted. Finally, surgical treatment by means of an open reduction and internal fixation yielded optimal results. Chang and Wu15 showed that, in case of contraindication of a plate fixation due to a contaminated pelvic environment, an external fixation can be an equivalent surgical method of pubic symphysis diastasis. Dunivanet al.[6] so underlined the advantages of an immediate external fixation in a case of a gap of pubic symphysis measuring 62mm. As a consequence, these works suggest the indication of an operative approach if a gap of the pubic symphysis is larger than 40mm.[4,6,13,14] As we highlight in our case report, we agree with this threshold.

CONCLUSIONS

Pubic symphysis rupture is an uncommon but often underestimated injury after vaginal delivery that can lead to significant chronic disability. Therefore, in case of peripartum suprapubic pain, it is important to consider a pubic symphyseal diastasis that requires interdisciplinary treatment. In cases of a gap greater than 40mm, a surgical intervention may result in better outcome including shorter hospitalization, earlier ambulation, and the opportunity to cope with the new circumstances of her motherhood.

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CASE REPORT: GYNAECOLOGY & OBSTETRIC UNUSUAL OBSTETRIC COMPLICATIONS REFERRED TO LILAVATI HOSPITAL FOR TERTIARY CARE AND SUCCESSFUL MANAGEMENT

Dr. Kiran Coelho, *MD, DGO, DFP,* **Dr. Pooja Oza,** *DNB Student,* **Dr. Pooja Wagh,** *DNB, DFP*

CASE II

Rare Case of Misplaced and Retained Episiotomy Needle

INTRODUCTION

Episiotomy is defined as a surgical incision in the perineum to enlarge the vaginal opening for birth.It was introduced as an obstetric procedure more than 200 years ago and became a common practice from the beginning 20thcentury. It is the only surgical procedure in obstetrics which is performed without the patient's specific consent[1]

A number of observational studies and randomized controlled trials show that routine episiotomy is associated with an increased incidence of anal sphincter and rectal tears[2,3,4].

The long held belief that postoperative pain is less and healing improved with episiotomy compared with perineal tear appears not to be true[5].

Episiotomy needle missing after it breaks during repair is quite rare and can happen with junior doctors and trainees. This sometimes results in serious morbidity to the patient. Recovering the missing needle becomes a real problem as the needle migrates to a distant place through tissue planes and can get embedded deep inside, which is very difficult to retrieve.

Looking for it and retrieving it, is literally like looking for a "needle in a hay stack"

CASE REPORT:

30 year old G2P2L2 married since 4 years, came to Lilavati Hospital and Research Centre, Mumbai in November 2014, with the complaint of pain and pricking sensation in perineal region on and off since 3 years.

She underwent a full term vaginal delivery 3 years ago during which a left mediolateral episiotomy was given. She delivered a 3.2 kg female child. During the episiotomy suturing, the needle had broken and was not traceable on exploration. She was reassured that it would not create any medical hazard nor will it affect her future obstetric carrier and hence was left in situ.

She had complains of pain in gluteal region on and off.

No complaints of any dyspareunia or tenesmus post delivery. Her bowel and bladder habit were normal.

She approached the same obstetrician during her second pregnancy where she was advised an elective cesarean section considering that the misplaced needle in situ might injure the baby during the process of natural birth.

She delivered a 3.4 kg male child by cesarean section in July 2014 followed by which she had the complain of pain in perineal region on and off.

MANAGEMENT:

She was fully investigated. X Ray and CT scan was done to see the location and extent of the needle. It was located deep in the ischiorectal fossa.

She underwent an exploration of perineum under general anesthesia with fluoroscopic (C-arm) guidance. The planes were dissected carefully and needle was traced with great difficulty in the deep muscular plane near the ischiorectal fossa. Full length of needle was retrieved and was shown to the relatives. Perinium was closed in layers. She was given good antibiotic and coverage and antiseptic washes for perineal hygiene. Abstinence was advised for 3 to 4 weeks.

CASE REPORT II : RARE CASE OF MISPLACED AND RETAINED EPISIOTOMY NEEDLE

She was seen again on follow up after 7 days where the scar line was healthy and patient was free from pain.

CONCLUSION:

A missing broken needle during episiotomy repair is possible particularly in the hands of the house-surgeons and could be retrieved immediately in most of the occasions. But sometimes the problem of retrieving this foreign body becomes a real challenge as was in this case. Therefore one should be very careful during repair, particularly when working in a deeper and higher plane to avoid such complication.

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CASE REPORT: NEPHROLOGY FROSTY MAN

Dr. Jhumar Makhija, *MD (Med),* **Dr. Anup Chaudhari,** *DNB (Med), DNB Nephrology,*
Dr. Hemant Mehta, *MD (Med.), DM (Nephrology), DNB (Nephrology)*

A 26 -year-old man with chronic kidney disease secondary to chronic tubulointerstitial disease was admitted with generalized weakness, vomiting and itching all over the body for 10 days and with documented non-adherence to medical management. Physical examination revealed a pulse rate of 98/minute, blood pressure of 140/80 mm Hg, bilateral lung crackles, and pitting edema of the lower extremities. The skin over both shins and left side of the face had scattered deposits of white, friable, crystalline material, with a "frosted" appearance[1, 2]. These deposits were confluent in some areas and discrete in other (Figs 1, 2). Pertinent

Fig. (1). White, friable, crystalline material over the external ear.

laboratory data were as follows: hemoglobin, 6.7 g/dl; serum sodium 130 mEq/l; bicarbonate, 10 mEq/l; blood urea nitrogen 182 mg/dl; and serum creatinine 35.74 mg/dl. Hemodialysis was initiated. The crystalline, white material on his shins was uremic frost seen in extreme azotemia, which disappeared after 3 sessions of hemodialysis. Laboratory data after initiation of hemodialysis showed serum sodium 138 mEq/l; bicarbonate 27.6mEq/l; and serum creatinine 10.57 mg/dl.

Fig. (2). Crystalline white material deposited on the shin.

Hirschsprung first described uremic frost in 1865. This dermatological manifestation of severe azotemia is rarely seen today because of timely implementation of renal replacement therapy. The concentration of urea in the sweat increases greatly when blood urea nitrogen level is high.

Evaporation of sweat with high urea concentration causes urea to crystallize and deposit onto the skin. To verify that the crystals are composed of urea or nitrogenous waste, scrapings of the frost can be diluted in normal saline, which can then be tested for elevated urea nitrogen levels comparable to blood levels

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CASE REPORT: NUCLEAR MEDICINE GOLD TOXICITY: A RARE PRESENTATION AS AUTONOMIC NEUROPATHY

Dr. Patil Pallavi, *MBBS,* **Dr. Lele R. D.,** *MBBS, MRCP (Edin), FRCP (London), Hon. D. Litt.*
Dr. Ansari Abdul, *M.D, IDCCM, FNB*

Mr. R.M., a 55 year old non diabetic male presented with complaints of severe giddiness and nausea associated with change in posture. He had a similar episode associated with loss of consciousness 1 year ago. 2 years ago, the patient had pleural effusion attributed to pulmonary Koch's infection. He underwent a right parotidectomy in August 2014 for a benign cystic lesion. The patient is a jeweller by profession with frequent exposure to gold in his workshop. Clinically the patient is average built, afebrile with a normal pulse rate. The blood pressure was 100/ 70 mm of Hg in supine and 80/ 50 mm of Hg in standing position (postural hypotension).

- CBC showed hemoglobin level of 11.8 gm% with normal WBC and platelet count.
- USG revealed bilateral medical renal disease and moderate prostatomegaly.
- Urine 5 HIAA, Serum & urine VMA levels were normal. The MIBG scan was negative for the presence of a pheochromocytoma.
- MRI of Brain revealed tiny ischemic lesions in the white matter of centrum semiovale.
- Nerve conduction study suggested a sensory motor radicular peripheral neuropathy in the lower limbs.
- Tilt table test was positive for vasodepressive response
- Holter EKG revealed multiple short runs of sinus tachycardia associated with symptoms of palpitations.
- pANCA, cANCA, Anti ds DNA, Anti Choline receptor antibody, gamma interferon for Tuberculosis, complement C3,C4, ACE, urinary porphobilinogen, rapid plasma reagin were negative.
- Biochemically there was no evidence of thyroid disorder, multiple myeloma or raised IgG, IgA levels.
- Cold agglutinins were detected (titre 32), Prolactin level mildly elevated (20.28 ng/ml).

Toxicity screen of blood revealed raised levels of gold-

01/12/14 - 35.3 µg/L (normal range: 0.006 - 0.018)

20/01/15 - 14.4 µg/dl (normal <0.1)

After reviewing literature reports of treatment of gold toxicity in patients with Rheumatoid Arthritis (RA) in the 1940s, a decision was made to start treatment with intramuscular injection Dimercaprol (BAL – British Anti- Lewisite) after obtaining written informed consent of the patient.

The following regimen was started on 28/01/15

Day 1 - 100 mg QID

Day 2, 3 & 4 - 100 mg BD

Day 5 & 6 - 100 mg OD

There were no adverse drug reactions after initializing the treatment.

Repeat serum gold level estimation after 4 weeks of completion of treatment were found to be in the

GOLD TOXICITY: A RARE PRESENTATION AS AUTONOMIC NEUROPATHY

normal range with clinically reduced frequency of postural hypotension.

24/02/15- Sr. gold level- 0.028 ug/dl (normal <0.1)

8 weeks later the patient was completely free of postural hypotension and resumed his office duties.

Review of literature on Gold toxicity in a case series of 15 patients revealed symptoms of dermatitis, stomatitis, hepatitis, chrysiasis proteinuria, skin pigmentation and hypoplastic anemia[1]. In another case series of 5 patients who received 750 courses of gold injections given for treatment of RA, reported adverse drug reactions consisted of pruritis, seborrhoeic dermatitis, urticaria, purpura, anemia, stomatitis, agranulocytosis, jaundice, gastroenteritis and conjunctivitis[2]. Additional toxic manifestations like peripheral neuritis, dizziness, nausea and vomiting were reported by others.

BAL was developed in 1945 during World War II as an antidote for Arsenic poisoning. Ragan and Boots demonstrated that animals treated simultaneously with Gold and BAL showed no toxic effects in the heart, liver and kidney. BAL was then used in 5 cases of RA with gold dermatitis in man with good results[3]. Cohen et al (1947) reported 5 cases of gold toxicity, 3 with dermatitis, 1 with pruritis and conjunctivitis and 1 with stomatitis who were successfully treated with BAL[2].

Our patient had proven autonomic neuropathy on Tilt table test with clinically fluctuating blood pressure. Autonomic neuropathy (orthostatic hypotension) has not been described with gold toxicity. It is remarkable that in our patient the orthostatic hypotension disappeared completely after treatment of gold toxicity with BAL.

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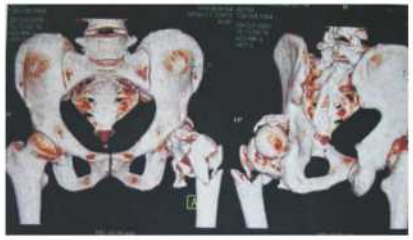
CASE REPORT: ORTHOPAEDIC SURGERY HIP REPLACEMENT FOR "FLOATING HIP"

Dr. C. J. Thakkar, *M.S.(Ortho), DNB*

Floating hip is a term coined when there are fractures on either side of the hip joint. Like in the below illustrated case there was fracture of the acetabulum with dislocation of the hip and multi fragmentary fracture of the upper end of the femur bone

50 years male involved in a road traffic accident had posterior wall fracture with posterior dislocation of hip and comminuted peri trochanteric fracture on the left side



Studying various radiological views it was obvious that only reconstruction of this joint may not give good function and hence it was decided to do primary hip replacement

Approach was posterior as first one had to restore the integrity of posterior wall of the acetabulum This was done using a reconstruction plate extending from ilium to ischium. A non cemented acetabular cup with ceramic liner was used. In view of comminution of proximal fragment it was decided to use calcar replacement diaphyseal fix femoral prosthesis. Abductor mechanism with pieces of greater trochanter was attached to the femoral stem using stainless steel wires

Challenges faced on the table were reconstruction of comminuted posterior wall and stable fixation of non cemented acetabulum component. Since the dome of acetabulum was intact, primary stability could be achieved with relative ease. This was further supplemented using one screw in the dome.

HIP REPLACEMENT FOR "FLOATING HIP"

The greater challenge in this case was on the femoral side. One had to restore the limb length and correct femoral version, restore the abductor mechanism and get excellent stability for early mobilization. This was achieved by selection of revision prosthesis, ceramic head of 32mm size was used

Post operatively, in view of excellent primary stability of both acetabular and femoral components, partial weight bearing with help of walking aid was started immediately. In view of abductor reconstruction, walking aid was continued for 8 weeks.

This excellent result was possible because of team work of highly specialized anaesthetists who gave prolonged hypotensive anaesthesia, team of young DNB fellows who assisted during surgery and took excellent post operative care, well trained theatre staff, motivated physiotherapist who made him up in 24 hours post surgery.

CASE REPORT: PAIN MANAGEMENT MANAGEMENT OF CRPS-TYPE I: COMBINATION OF STELLATE GANGLION BLOCK AND CONTINUOUS BRACHIAL PLEXUS BLOCK (ULTRA SOUND GUIDED)

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Dr. Hemangini Barot, *M.D (Anaesthesia), Fellowship in Pediatric Anaesthesia*
Dr. Sangeeta Deka, *M.B.B.S,MD (Anaesthesia)*

ABSTRACT

The Complex Regional Pain Syndrome (CRPS) I- is a neuropathic pain syndrome, characterized by pain, vasomotor and dystrophic changes, and often motor impairments with reduced mobility. The aetiology is unknown so diagnosis can be difficult so main focus remains on pain management and restoration of physical function. The conservative treatment approach is both non-pharmacological, pharmacological methods and interventional pain treatment procedures as diagnostic cum therapeutic therapy is centred on sympathetic and somatic blocks.

We report a case of CRPS type-I, in a 59 yrs female with symptoms of intractable pain following accident and injury to right shoulder which was successfully managed by a stellate ganglion block and continuous inter scalene brachial plexus block resulted in effective pain relief and 90% restoration of function.

INTRODUCTION

CRPS is described as an array of symptoms characterized by a continuous spontaneous and or evoked regional pain that is disproportionate in time or degree to the usual course of any known trauma or other lesion. The pain is regional and nonspecific to nerve injury or dermatome, and usually has distal predominance of abnormal sensory, motor, sudomotor, vasomotor and or trophic findings.

CRPS is further divided in to Type I and II. CRPS Type I is frequently triggered by tissue injury but no underlying nerve injury. CRPS II cases are usually associated with nerve injury.

The syndrome shows variable progression over time. CRPS may occur at any age and affects both men and women, though most agree that it is more common in young women.

The causes of CRPS are unknown. The sympathetic nervous system plays an important role in sustaining the pain. Theories suggest that pain receptors in the effected part of the body become responsive to catecholamines. Animal studies do not indicate that nor can epinephrine activate pain pathways after injury. The incidence of sympathetically mediated pain in CRPS is unknown.[1]

Another theory suggests that CRPS is a result of triggering of the immune response which results in inflammatory symptoms of redness, warmth, and swelling in the affected areas.

Physiological windup and central sensitization are key neurologic processes involved in conduction and maintenance of CRPS. There is evidence at NMDA receptors involved in CNS sensitization. It is also hypothesized that elevated CNS glutamate levels promote physiological windup and central sensitization. The immune process may contribution to peripheral and central sensitization.[1]

We report a successfully managed CRPS type I of right upper extremity with a stellate ganglion block, supplemented with a continuous brachial plexus block (Ultra sound guided) resulted in excellent pain relief and restoration of pain free movements.

MANAGEMENT OF CRPS-TYPE I: COMBINATION OF STELLATE GANGLION BLOCK AND CONTINUOUS BRACHIAL PLEXUS BLOCK (ULTRA SOUND GUIDED)

CASE REPORT

A 59 yrs old female (LS) visited pain management clinic of this hospital with complains of pain, swelling burning, even slight touch resulted in severe pain, decreased sweating and painful movements of right upper extremity for duration of 8 months. She had history accident to the right shoulder two years back without any evidence of fracture of bone or nerve injury.

Patient had severe pain, restricted movement of right shoulder and swelling of the right forearm and hand. The pain was described as sharp, shooting with intensity being a 9/10 on Visual Analog Scale (VAS); burning; light touch, even clothes touching the arm was painful (allodynia). The use of multiple drugs including NSAIDs, opioids, steroids and neuropathic medications had little benefit.

The clinical examination revealed circumferential edema over forearm and palm. The skin was shiny with hyperalgesia to light touch. There was no evidence of hyperhidrosis or excessive hair growth. However patient did mentioned about decreased sweating in right upper limb. The movements of the upper limb at shoulder, elbow, wrist and finger were minimum and painful. There were no trophic changes of right upper extremity.

The probable diagnosis of CRPS type I done and Rt. stellate ganglion block, supplemented with a continuous brachial plexus block (Ultra sound guided) was planned. She was put on medications Gabapentin, Amytryptallin, Tramadol, Paracetamol and Pantaprazol with Domperidone.

The details of procedure explained and an informed consent obtained. The routine blood investigations such as Bleeding time, clotting time, HIV, HCV and HBsAg was done.

She was given supine position with head slightly extended and turned to left side. The monitoring included pulse oximetry, non invasive blood pressure and continuous ECG monitoring. An IV line was secured on left hand. IV antibiotic was given.

Stellate Ganglion Block (Rt.) - After preparation of area, the transverse process of C6 was identified under fluoroscopy. The right sternocleidomastoid muscle and carotid artery was retracted laterally with firm pressure of operator's three fingers just above supra sterna notch.

A 22 gauge needle filled with normal saline was directed medially and inferiorly towards the body of C6, to hit transverse process and then withdrawn by 1-2 mm to rest outside the longus colli muscle. Inj. Omnipaque (non ionic contrast) 3cc was injected and spread of dye confirmed fluoroscopically. Figure. 1

Figure.1
Rt. Stellate Ganglion block- Dye Spread

MANAGEMENT OF CRPS-TYPE I: COMBINATION OF STELLATE GANGLION BLOCK AND CONTINUOUS BRACHIAL PLEXUS BLOCK (ULTRA SOUND GUIDED)

Now Inj. Loxicard 2% (preservative free lignocaine) 10cc injected with intermittent repeated negative aspiration. The patient had immediate pain relief VAS 2-3/10 and could move right elbow, wrist and fingers without pain.

Brachial plexus block (RT) - With the patient in the same position, scanning of supraclavicular fossa using ultrasound was done to identify the subclavian artery as it passes over the first rib. The Brachial plexus was identified as a "bunch of grapes" lying supero-lateral to the subclavian artery. Using in-plane approach a 50mm 22g contiplex needle was inserted from lateral to medial direction at a shallow angle under ultrasound so that the entire shaft and the tip of the needle was visualized. (Fig no.2)

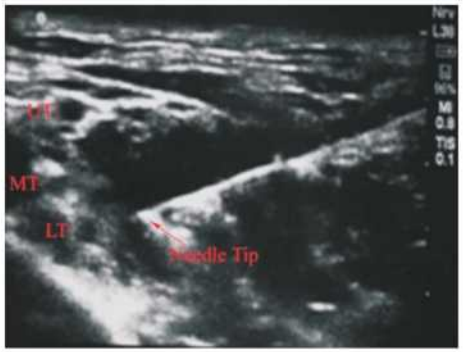

Fig no.2 -
Ultrasound image of in plane needle lying next to nerve structures in interscalene groove.
UT- upper trunk, MT- middle trunk, LT- lower trunk of brachial plexus.

The nerve stimulator was connected to the stimulating needle and set to deliver a 0.8 to 1.0 mA current at 1 Hz frequency and 0.1 ms of pulse duration. The needle was slowly advanced until the upper trunk was identified by a muscle twitch of the shoulder muscles. Inj. Loxicard (preservative free lignocaine) 2-3 cc was injected to hydro-dissects and opens up the fascial plane to clearer visualization of the nerve structures. Now Inj. Ropivacaine 0.2% 4-5cc was injected slowly with intermittent negative aspiration for blood, which spread anterior and posterior to the nerve structures and surrounded the nerve like a doughnut shaped hypo echoic area.

An 18g catheter was introduced through the contiplex cannula and 5 ml of local anesthetic injected through the catheter; the spread of which was visualized under ultrasound to confirm proper catheter placement. The catheter was secured by tunnelling in the skin.

An elastomeric balloon pump containing 200ml of 0.2% Ropivacaine was attached to the catheter @ the rate 3ml/hr. Patient had immediate relief of about 40-50% with VAS score going down to 4/10 after the block. After 18hrs she complained of numbness of right forearm and wrist. The dose reduced to 1cc/hr. The catheter was removed after 48hrs of continuous infusion and patient was discharged. She had uneventful stay in hospital.

On follow up after four weeks the patient had significant reduction in pain VAS 2-3/10 and range of pain free movements of the right shoulder and arm improved. She could raise her shoulder and arm straight above effortlessly. There was no oedema and allodynia, hyperlagesia was negligible. The sweating in the right upper extremity increased.

MANAGEMENT OF CRPS-TYPE I: COMBINATION OF STELLATE GANGLION BLOCK AND CONTINUOUS BRACHIAL PLEXUS BLOCK (ULTRA SOUND GUIDED)

She also had osteopenia which was treated accordingly. The dosage of neuropathic and other pain drugs reduced and continued for six weeks.

DISCUSSION

The CRPS is known for various clinical syndromes such as Sudeck's atrophy, traumatic arthritis, minor causalgia, post-traumatic, osteoporosis, post-traumatic pain syndrome, post-traumatic edema, post-traumatic angiosperms, shoulder-hand syndrome, etc.

The CRPS was defined by the International Association for the Study of Pain as continuous pain in a portion of an extremity after trauma, which may include fracture but does not involve major nerves. It is associated with sympathetic nervous system changes but is not a disease of the sympathetic nervous system.

The IASP list diagnostic criteria for CRPS[2] are presence of an initiating noxious event or a cause of immobilization; allodynia or hyperalgesia disproportionate to the inciting event and evidence of edema, change in skin blood flow, or abnormal sudomotor activity in the area of pain.

The treatment approach for CRPS and sympathetically maintained pain syndromes are multi modal one which includes medications, sympathetic block and physiotherapy. Sympathetic blockade in upper extremity includes stellate ganglion block, cervical epidural sympathetic block, interscalene brachial plexus blocks, intravenous regional (Bier) block. The basis of physiotherapy is passive range of motion, isometric strengthening, to rehabilitate the joint or joints which are not functioning properly and strengthen the muscles. And do this while the sympathetic blockade is in effect and wide dynamic range neurons are being rested.

Many different drugs are used to treat CRPS including NSAIDs, topical analgesics, anti-seizure drugs, relaxants, antidepressants, hypnotics, corticosteroids, calcium channel blockers and upload. TENS and acupuncture may sometimes help. It may be necessary to remove a trigger zone for e.g. small neuromas on peripheral nerves, which may be removed through the use of surgery, radiofrequency, alcohol or cryoneurolysis.

If the CRPS is from a compressed nerve, such as with carpal tunnel syndrome, then surgery to release pressure on the nerve may be needed (i.e. carpal tunnel release). Occasionally surgical sympathectomy is used to divide the sympathetic nerves in patients that are helped by nerve blocks, but its use is controversial. Other options include spinal cord stimulation and intrathecal drug pumps, in which pain medications are injected continuously into the space around the spinal cord.

Stellate ganglion block is associated with Horner's syndrome which includes ptosis, enophthalmos, and redness of the eye conjunctiva and may also lead to increased amplitude of accommodation, paradoxical contra lateral eyelid retraction, transient decrease in intraocular pressure and changes in tear viscosity.

Although the standard practice is to use Inj Xylocaine 1% but we preferred, Inj. Xylocaine 2% to have motor block, as patient had intractable pain and severe hyperlagesia.

We decided to use Inj. Ropivacaine for continuous infusion at the interscalene groove for brachial

MANAGEMENT OF CRPS-TYPE I: COMBINATION OF STELLATE GANGLION BLOCK AND CONTINUOUS BRACHIAL PLEXUS BLOCK (ULTRA SOUND GUIDED)

plexus block and a single shot of local anaesthetic at the stellate ganglion. Also the continuous brachial plexus block would provide analgesia for both sympathetic and the somatic components of his pain. In this case we noticed numbness due to higher concentration of drug.

Ultrasound visualization of anatomical structures offers safe blocks of superior quality by optimal needle positioning. In addition, the amount of local anaesthetic needed for effective nerve block can be minimized by directly monitoring its distribution.[3] A study conducted by Chan et al on 188 patients undergoing elective hand surgery demonstrated that ultrasound guidance, with or without concomitant nerve stimulation, significantly improves the success rate of axillary brachial plexus block.[4]

Murrey P. et.al[5] reported continuous brachial plexus block for successful management of reflex sympathetic dystrophy. Toshniwal G et al[6] compared the efficacy of continuous stellate ganglion (CSG) block with that of continuous infraclavicular brachial plexus (CIBP) block in management of CRPS type I of upper extremity in a group of 33 patients each. They used an infusion of 0.125% Bupivacaine at a rate of 2-5 ml/hr. CIBP group showed statistically significant improvement in neuropathic pain scale score (NPSS) compared with CSG group during the first 12 hours after the procedures (P value <0.05). After 12 hours, the NPSS was comparable between the groups. After 4 weeks, both groups showed clinically significant improvement in edema score and range of movement of all upper extremity joints when compared with the baseline. This study concluded that CIBP block and CSG block may be effective interventional techniques for the management of CRPS type I of upper extremities.

Ribbers GM et al[7] published a study of six patients of CRPS type I and II that benefitted from continuous axillary brachial plexus block. In another case report by Miles Day et al[8] a patient of long standing CRPS I was successfully treated by continuous infraclavicular brachial plexus block. Adam Everett et al[9] in a case report describes the rapid resolution of an unusual presentation of CRPS type I after four days of treatment with a continuous sciatic peripheral nerve block and a concomitant parenteral ketamine infusion.

CONCLUSION

CRPS is a complex pain syndrome with many known or unknown aetiology and is challenging for treating physician and needs a multi modal approach. If the pain is out of proportion to any injury they have suffered, it should be assumed that the source is CRPS or sympathetically maintained pain until proven otherwise.

Most physicians believe that early treatment is helpful to limit the disability from CRPS. Patient should be referred to a pain specialist or to a pain centre which specializes in the treatment of these conditions. The back bone of treatment for this disease is blocks, physical therapy, drugs and psychological counselling.

MANAGEMENT OF CRPS-TYPE I: COMBINATION OF STELLATE GANGLION BLOCK AND CONTINUOUS BRACHIAL PLEXUS BLOCK (ULTRA SOUND GUIDED)

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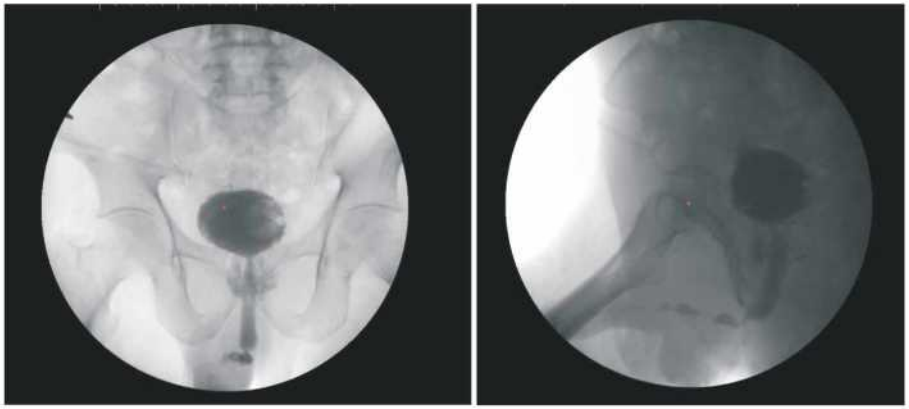
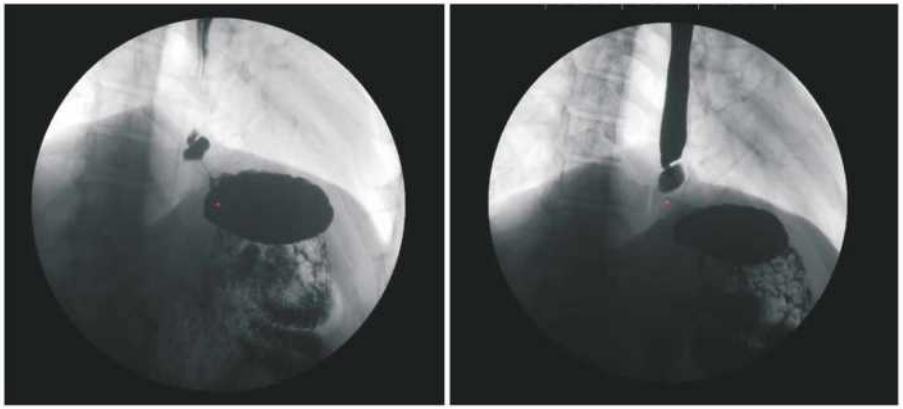
IMAGES OF THE MONTH



Micturating Cystourethrogram showing multiple strictures in anterior urethra with pre-stricturous dilatation of prostatic and membranous urethra and reflux of contrast into ducts of Cowpers gland



Barium Swallow spot films showing Schatzki ring at lower oesophagus above Gastro-oesophageal junction with hold up of Liquid barium and solids (Bread piece dipped in barium) in that region.

STRAIGHT FROM THE HEART

Great experience! Clean, pleasant atmosphere, patient friendly staff, The Best hospital in Mumbai. I feel like home here!

Dr. D Y Patil

You people are serving in the best way, thanks to all of your hospital staff for my speedy recovery.

Ms. Ritu Banthia

Great Professionalism of the staff, The cleanliness of the hospital and your service made to feel like a home guest rather than just a patient

Mr. Geoffrey Menezes

Everything was excellent. It begins with your slogan "More than health care, Human care". This slogan sums up everything. I am unable to find any flaws; it is so perfect and organised!!

Mr. Harishbhai Kapadi

Excellent Medical expertise, nursing service. Superb dedication of all the doctors and staff. Keep up the excellent standards already set

Mr. Ganpathy Subramanian

Lilavati Hospital is very good and clean. Staff at the hospital is well trained and knowledgeable. Appreciate your help

Ms. Rosy Collaco

You are really doing good job. God bless the good souls and returning smiles on our faces

Ms. Monali Ghag

Great team of doctors attended to me during my delivery with utmost care and promptness. Very good service by all the staff, nurses and housekeeping. Very friendly and courteous.

Ms. Diya Jadhav

EDUCATIONAL ACTIVITIES

LIVE SURGICAL AND INTERVENTIONAL SURGICAL WORKSHOPS CONDUCTED

Conducted by	Topic	Organized in
Dr. Rajesh Maniar	Live Knee replacement Surgery	April,2015
Dr. Samuel Mathew Kalarickal	Live Bifurcation-Coronary Stenting (CSI-NIC,Mid Term Meet)	April,2015

CME

Lilavati Hospital 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. Lilavati Hospital and Research Centre has been accredited by Maharashtra Medical Council for conducting CMEs.

Sr. no.	Topic	Organized in
1	Paediatric Cardiology	Nov,2014
2	GI Emergency	Dec,2014
3	Nephrology Updates	Jan,2015
4	Vascular Disease	Feb,2015
5	Minimal Access Surgery	Feb,2015
6	Urology Updates	March,2015

Pediatric Cardiology

Nephrology Updates

Vascular Disease

Minimal Access Surgery

The conference is under the auspices of,

Lilavati Hospital and Research Centre

Organised by:

Pain Management and Research Foundation India

&

Dept. of Anaesthesiology and Pain,
Lilavati Hospital and Research centre

GLOBAL UPDATE ON PAIN (VI)

19th to 22nd November 2015

By

Pain Management and Research Foundation, India and Dept. of Chronic Pain and Anaesthesiology, Lilavati Hospital and Research Centre

"Endorsed by the Interventional Pain Medicine Special Interest Group of the British Pain Society"

Under the Auspices of

LILAVATI HOSPITAL AND RESEARCH CENTRE, MUMBAI

Venue: Mumbai Education Trust, Auditorium, Bandra Reclamation, Bandra (West) Mumbai, India - 400 050

Theme- "Total Pain Management"

MMC accredited

HIGHLIGHTS

- Plenary Sessions, Seminars, Symposia, Panel discussions and Poster Presentations.
- **Hands on Cadaver Workshop**
- **Pain Exhibition** and **Pain Awareness Program** for Lay People

REGISTRATION FEES

Category	Up to July 2015	Aug to 15th Oct. 2015	October 15 onwards
Delegate	Rs. 5500/-	Rs. 6500/-	Rs. 7500/-
Accompanying Person	Rs. 3500/-	Rs. 4500/-	Rs. 5500/-
P.G. Students	Rs. 3500/-	Rs. 4500/-	Rs. 5500/-
Overseas Delegate	USD 250/-	USD 300/-	USD 400/-
Overseas Accompanying Person	USD 125/-	USD 150/-	USD 200/-
SAARC Countries	USD 175/-	USD 225/-	USD 275/-
SAARC Accompanying Person	USD 125/-	USD 150/-	USD 200/-

Hands on Cadaver Workshop (First Come First Basis) 80 only
The registration for conference is **Mandatory** to **Register** for **Hands on Cadaver Workshop**

Type	Basic	Advanced	Both
Delegate	Rs. 4000/-	Rs. 5000/-	Rs. 7000/-
Overseas Delegate	USD 150/-	USD 200/-	USD 300/-
SAARC Countries	USD 125/-	USD 150/-	USD 200/-

THE ORGANIZING COMMITTEE GLOBAL UPDATE ON PAIN (VI)

Patron - **Subhash Jain**
International President - **Sanjay Bakshi**
International Co-ordinator - **Sanjeeva Gupta, Maged El Ansari**
President - **Sushila Shah**
Vice Presidents - **B. J. Damany, V. M. Divekar, Indula Panchal, Saroj Sanghavi**
Organizing Co-chairman - **Preeti Doshi**
Jt. Secretaries - **Anil Parakh, Smita Sharma, Kritika Doshi**
Treasurer - **Ketan Parikh**
Cadaver Workshop co-ordinator - **Bharati Kondwilkar**

For Registration and other details contact any one of following:
Organizing Chairpersons
D. K. Baheti (9869233751) / **R. P. Gehdoo** (9820517674)
Organizing Secretaries
Satish Kulkarni (9821321063) / **Kailash Kothari** (93200275200)
Scientific Committee, Chairman
Jitendra Jain (9892989588)
Email: guop2015@gmail.com

PAYMENT DETAILS

DD / Cheque: in favor of **"Pain Management and Research Foundation-India"** payable at Mumbai
Registration Form can be downloaded from **www.painfoundationindia.com** or **Email to: guop2015@gmail.com**
Contact: 022-26751663

SEWA

The social service wing of the hospital-**SEWA**- serves to the health requirements of the 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 for organizing free health checkup 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, supplying, processing, storing, and corneal transplantation. We have also taken up new initiative of **"Swastha Bachpan"** which shall comprise of free health check ups for underprivileged children.

BENEFICIARIES

Year	Free OPD	Sewa Mobile Clinic
2013-2014	14301	30232
2014-2015	14371	21207

Swastha Bachpan Initiative

FREE MEDICAL CAMP AT GHATKOPAR, PARASDHAM FOUNDATION

FEATHERS IN CAP...

Efforts and hard work put in by team Lilavati Hospital has resulted in various awards and accolades:

- *In 2013,2014: "THE WEEK" magazine has rated Hospital as* ***"Number 1 Multispecialty Hospital in Mumbai"***

- *Hospital has been rated amongst* ***"Top 10 Hospitals of India"*** *2013, 2014 by "THE WEEK" magazine.*
- *Winner in the category* ***"Most Popular Maternity Hospital (All-India)"*** *in the 2nd edition of Child Most Popular Awards, 2014, Child India Magazine.*
- *Hospital emerged as the* ***Runner-Up*** *in the category* ***India's Most Popular Maternity Hospital;*** *in the inaugural edition of* ***Child Best Awards 2013*** *by Child India Magazine*
- *Hospital has been recognized as* ***"India's best Multi Speciality Hospital-Megapolis"*** *by ICICI Lombard and CNBC TV 18* ***in India Healthcare Awards 2013.***
- *Hospital has been recognized as* ***"India's best Multi Speciality Hospital-Metro"*** *by ICICI Lombard and CNBC TV 18* ***in India Healthcare Awards 2012.***
- *Hospital is* ***Gold Winner*** *of* ***"Reader's Digest Trusted Brand Award 2012"*** *in category 'Speciality Hospital.*
- *Hospital is an official* ***ESMO (European Society for Medical Oncology) Asia CME Partner*** *Centre in Colorectal Cancer Program in India.*
- *Quality Council of India (QCI) has accredited Lilavati Hospital & Research Centre with* ***NABH*** *in February 2011 and Reaccredited in 2014.*

Lilavati Hospital Doctors Achievements

- *Dr. K. N. Shah has been awarded* ***"Life time achievement award"*** *on 1st February 2015 by C-Ward Medical Association for his contributions to Pediatrics, Pediatric Epilepsy and Pediatric Neurology. He was also felicitated on 28th Feb, 2015 by General Practitioner's Association Greater Bombay for his contribution to the Academic programmes for the General Practitioners of Bombay. He is also awarded with* ***"Neucon Lifetime achievement award"*** *2014 for his accomplishments and contribution to the field of Neurology.*
- *Dr. Sanjeev Mehta became the chairperson of the* ***Council of Global Governors for Chest (American College of Chest Physicians / ACCP)*** *and also became member of the* ***Board of Regents of The American College of Chest Physicians.***
- *Dr. P. Jagannath has received distinguished service* ***Gold medal award of Asia Pacific Hepato Pancreato-Biliary at Singapore*** *last month. He is the first Indian to be the immediate past president of the* ***Asia Pacific Hepato Pancreato-Biliary Association.***

SERVICES AVAILABLE

MEDICAL

Anesthesiology
Audiology and Speech Therapy
Cardiology
Chest Medicine
Chronic Pain Management
Dental
Dermo Cosmetology
Diabetology & Endocrinology
Gastroenterology
Haematology
Hair Transplant
Internal Medicine
Infectious Diseases
Nephrology
Neurology
Head and Migraine Clinic
Psychiatry / Psychology / Neuropsychology
Medical Oncology
Pediatrics
Rheumatology
Physiotherapy
Sleep Medicine

SURGICAL

Bariatric Surgery
Cardiothoracic Surgery
Colorectal Surgery
ENT and Head & Neck Surgery
Gastro Intestinal Surgery
General Surgery
Gynecology, Obstetrics & IVF
Transplant: Corneal & Kidney
Minimal Invasive Surgery (Laproscopic Surgery)
Neuro Surgery
Spine Surgery
Onco Surgery
Ophthalmology
Orthopedics, Sports Medicine
Pediatric Surgery
Plastic & Reconstruction Surgery
Urology, Andrology
Vascular Surgery

CRITICAL CARE

Intensive Care Unit (ICU)
Intensive Cardiac Unit (ICCU)
Surgical Intensive Care Unit (SICU)
Paediatric Intensive Care Unit (PICU)
Neo-Natal Intensive Care Unit (NICU)
Paralysis & Stroke Unit

DIAGNOSTICS

Imaging Services
CT
MRI
X-ray
BMD
OPG
Sonography (USG)
Mammography
Nuclear Medicine
Interventional Radiology

LABORATORY SERVICES

Pathology
Microbiology
Histopathology
Blood Bank

24 HRS SERVICES

Ambulance
Emergency
Pharmacy

DOCTORS ASSOCIATED WITH LILAVATI HOSPITAL

Andrologist
Dr. Shah Rupin S.

Anaesthesiologist
Dr. Barot Hemangini
Dr. Baxi Vaibhavi
Dr. Budhakar Shashank
Dr. Gandhi Nisha
Dr. Gaiwal Sucheta
Dr. Gawankar Prakash
Dr. Joshi Kunal
Dr. Kharwadkar Madhuri
Dr. Kulkarni Satish K.
Dr. Mahajan Anjula
Dr. Mascarenhas Oswald
Dr. Khatri Bhimsen
Dr. Shah Falguni

Audiology & Speech Therapists
Dr. Bhan Satyan
Dr. Gorawara Pooja
Dr. Parulkar Bakul
Dr. Patadia Rajesh
Dr. Thakur Zohaa

Cardiovascular & Thoracic Surgeons
Dr. Bhattacharya S.
Dr. Honnekeri Sandeep T.
Dr. Jaiswal O. H.
Dr. Joshi Suresh
Dr. Kaushal Pandey
Dr. Kumar Pavan
Dr. Mehra Arun P.
Dr. Nand Kumar
Dr. Rachmale G. N.
Dr. Shetty Mohan

Cardiologists
Dr. Ballani Prakash H.
Dr. Bang Vijay
Dr. Dargad Ramesh R.
Dr. Gokhale Nitin S.
Dr. Hemant Kumar
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. Punjabi Ashok H.
Dr. Samuel K. Mathew
Dr. Sanzgiri P. S.
Dr. Shah Chetan
Dr. Sharma Anil K.
Dr. Suratkal Vidya
Dr. Vijan Suresh
Dr. Vyas Pradeep R.
Dr. Vora Amit
Dr. Vaishnav Sudhir
Dr. Vajifdar Bhavesh

Chest Medicine
Dr. Chhajed Prashant
Dr. Mehta Sanjeev K.
Dr. Prabhudesai P. P.
Dr. Parkar Jalil D.
Dr. Rang Suresh V.

Colorectal Surgery
Dr. Chulani H. L.

Cosmetic Surgery
Dr. Doshi Milan

Dentistry / Dental Surgeons
Dr. Bhavsar Jaydeep P.
Dr. Deshpande Dilip
Dr. Gala Dhimant
Dr. Joshi P. D.
Dr. Khatavkar Arun
Dr. Kamdar Rajesh J.
Dr. Nayak Arun
Dr. Parulkar Darshan
Dr. Sanghvi Sameer

Department of Imaging
Dr. Bajaj Anita
Dr. Chauhan Sonal
Dr. Deshmukh Manoj
Dr. Ingule Amol
Dr. Kulkarni Makrand
Dr. Mehta Mona
Dr. Sobti Shyam K.

Dermatologists
Dr. Goyal Nilesh
Dr. Mehta Nimesh
Dr. Oberai Chetan
Dr. Parasramani S. G.

Diabetologists
Dr. Joshi Shashank R.
Dr. Panikar Vijay

ENT Surgeons
Dr. Chaturvedy Gaurav
Dr. D'souza Chris E.
Dr. Kapadia Sanjay P.
Dr. Pusalkar A.
Dr. Parasram Kamal S.

Gastro Surgeons
Dr. Bharucha Manoj
Dr. Kulkarni D. R.
Dr. Mehta Hitesh
Dr. Shah Ankur
Dr. Varty Paresh
Dr. Wagle Prasad K.
Dr. Zaveri Jayesh P.

Gastroenterologists
Dr. Barve Jayant S.
Dr. Gupta Ravi
Dr. Kanakia Raju R.
Dr. Khanna Sanjeev
Dr. Phadke Aniruddha Y.
Dr. Parikh Samir S.
Dr. Shah Saumil K.

Gastroenterology and Hepatology
Dr. Shah Jayashri

General Surgeons
Dr. Garud T. V.
Dr. Mehta Narendra
Dr. Shastri Satyanand B.
Dr. Shetty Sadanand V.

Gynaecologist
Dr. Agarwal Rekha
Dr. Coelho Kiran S.
Dr. Dhanu Vilas R.
Dr. Goyal Swarna
Dr. Nanavati Murari S.
Dr. Pai Rishma D.
Dr. Palshetkar Nandita
Dr. Pai Hrishikesh
Dr. Shah Cherry C.

Haematology Clinical
Dr. Agarwal M. B.
Dr. Bhave Abhay

Headache & Migraine Clinic
Dr. Ravishankar K.

Healthcheckup Consultant
Dr. Desai Sandeep

Infectious Diseases Consultant
Dr. Nagvekar Vasant C.

Intensivist
Dr. Ansari Abdul
Dr. Vas Conrad Rui

Interventional Radiologists
Dr. Limaye Uday S.
Dr. Sheth Rahul
Dr. Warawdekar Girish

DOCTORS ASSOCIATED WITH LILAVATI HOSPITAL

Joint Replacement Surgeons
Dr. Maniar Rajesh N.

Nephrologists
Dr. Mehta Hemant J.
Dr. Shah Arun
Dr. Suratkal L. H.
Dr. Upadhyaya Kirti L.

Neurologists
Dr. Chauhan Vinay
Dr. D'souza Cheryl
Dr. Dalal P. M.
Dr. Sirsat Ashok M.
Dr. Vyas Ajay

Neuropsychologist
Dr. Panjwani Siddika

Neuro Surgeons
Dr. Dange Nitin
Dr. Goel Atul
Dr. Ramani P. S.

Nuclear Medicine
Dr. Lele R. D.
Dr. Luthra Karuna

Oncologists
Dr. R. Gopal
Dr. Smruti B. K.

Oncosurgeons
Dr. Chhabra Deepak
Dr. Deshpande Ramakant K.
Dr. Jagannath P.
Dr. Parikh Deepak
Dr. Sharma Sanjay
Dr. Shah Rajiv C.

Ophthalmology
Dr. Agrawal Vinay
Dr. D'souza Ryan
Dr. Mehta Salil
Dr. Mehta Himanshu
Dr. Nadkarni Shivram
Dr. Nagvekar Sandip S.
Dr. Shah Manish
Dr. Vaidya Ashish R.

Orthopaedic Surgeons
Dr. Agrawal Vinod
Dr. Archik Shreedhar
Dr. Chaddha Ram
Dr. D'silva Domnic F.
Dr. Desai Sanjay S.
Dr. Deshmukh Niranjan
Dr. Garude Sanjay
Dr. Joshi Anant
Dr. Kohli Amit
Dr. Mukhi Shyam R.
Dr. Nadkarni Dilip
Dr. Padgaonkar Milind
Dr. Panjwani Jawahar S.
Dr. Thakkar C. J.
Dr. Vatchha Sharookh P.
Dr. Warrier Sudhir

Pathologists
Dr. Chavan Nitin
Dr. Dhunjibhoy Ketayun R.
Dr. George Asha Mary
Dr. Mehta Kashvi
Dr. Rangwalla Fatema
Dr. Saraswat Shubhangi
Dr. Tampi Chandralekha

Paediatric Surgeons
Dr. Karmarkar Santosh J.
Dr. Nathani Rajesh
Dr. Redkar Rajeev G.

Paediatricians
Dr. Ali Uma
Dr. Avasthi Bhupendra
Dr. Chittal Ravindra
Dr. Gupta Priyam
Dr. Kanakia Swati R.
Dr. Lokeshwar M. R.
Dr. Sharma Shobha
Dr. Ugra Deepak

Paediatric Cardiology
Dr. Changlani Deepak K.

Paediatric Haematology / Oncology
Dr. Kanakia Swati R.

Paediatric Neurosurgery
Dr. Andar Uday

Paediatric Neurology
Dr. Kulkarni Shilpa
Dr. Shah Krishnakumar N.

Paediatric Opthalmology
Dr. Doshi Ashish

Pain Management
Dr. Baheti Dwarkadas
Dr. Jain Jitendra

Physicians / Internal Medicine
Dr. Ballani A. G.
Dr. Bandukwala S. M.
Dr. Dalvi Sunil G.
Dr. Gidwani Vinod N.
Dr. Jadwani J. P.
Dr. Medhekar Tushar P.
Dr. Medhekar Ameya T.
Dr. Nair C. C.
Dr. Shimpi Shrikant

Plastic Surgeons
Dr. Kumta Samir
Dr. Purohit Shrirang

Psychiatrist
Dr. Deshmukh D. K.
Dr. Shah Bharat R.
Dr. Vahia Vihang N.

Psychologist
Dr. Chulani Varkha

Physician / Rheumatologist
Dr. Gill Niharika
Dr. Sangha Milan

Physiotherapist
Dr. Garude Heena

Spine Surgeon
Dr. Bhojraj Shekhar
Dr. Mehta Satyen
Dr. Nene Abhay

Urologists
Dr. Pathak Hemant R.
Dr. Raina Shailesh
Dr. Raja Dilip
Dr. Sanghvi Nayan
Dr. Shah Sharad R.
Dr. Utture Anand
Dr. Vaze Ajit M.

Urological Laparoscopic Surgeon
Dr. Ramani Anup

Vascular Surgeons
Dr. Patel Pankaj
Dr. Pai Paresh