

Attribute

The Clinician's View

Issue 27: May - Aug 2016



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Special Feature: Medica Institute of Orthopedic Sciences (MIOS)

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MIOS: Reflecting the Strength of Knowledge and Teamwork



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The concept of Institutes of specialties of different types was first initiated in the East since inception of Medica Superspeciality Hospital. The seed sown in 2010 January with the soft launch of Medica Superspeciality Hospital in Kolkata has ramified into a tree of more than twelve hospitals of which five are up and running and the others are taking shape ready to be launched by the year end.

Medica Institute of Orthopedic Sciences forms an Integral and cohesive chain of four departments functioning in the group hospitals, which promises to grow and create standardized Orthopedic care in the existing hospitals and in the hospitals coming up in near future. The Institutes are already ramifying into various subspecialties with Orthopedic Trauma leading the way. Joint Replacement and Sports related surgeries, which include Arthroscopy, give MSH Kolkata a unique space in the treatment of modern orthopedic problems.

The specialty of Hand and Pediatric Orthopedic problems is nurtured under careful vigilance of **Dr. Anirban Chatterjee** who forms the backbone of various academic activities in the main hospital. The team is well coordinated with efforts of **Dr. Sutanu Hazra** who besides supervising the activities of the young and upcoming surgeons in the department also coordinates hip & trauma services on day to day basis.

A whole bevy of senior visiting consultants enrich Kolkata Medica including **Dr. Samar Gupta, Dr. Kiran Kumar Mukhopadhyay, Dr. Debapi Roy, Dr. Manabendra Bhattacharya, Dr. Saumitra Sircar** and the newer joiners bring with them their expertise in teaching and surgical experience.

Orthopedic Spine surgery and Deformity Correction, also form an integral part of the wide range of surgical work done in our Institution.

This prologue would be incomplete without a mention of my able colleagues in MIOS Ranchi, Jamshedpur and Siliguri.

Dr Pankaj Kumar and Dr Abhishek Agarwal (Siliguri), Dr. Ayan, Dr Rahul Sinha, Dr. Ankur Saurav (Ranchi), Dr. Nayeem (Jamshedpur)

form the backbone of the groups orthopedic activity too.

A special mention needs to be given to the new leadership in Jharkhand MIOS, which has been recently taken up by **Dr. Varun Chandra**, a very senior and well-known name in the Orthopedics in Eastern India. His joining us as Director Orthopedics Jharkhand would give us much needed experience in running and guiding the departments in this state.

Medica Institute of Orthopedic Sciences Kolkata stands today on the hard work of our team of senior residents and trainee residents too.

1800 plus small and major surgeries annually, more than 17000 OPD patients, 400 plus joint replacements, more than 600 knee surgeries including replacements and arthroscopies along with Trauma, Pediatric, Hand and Spine Surgeries justify the DNB teaching which is in the third year of its tenure.

Aiming to be the most advanced and being one of the busiest Joint Replacement Center of Eastern India we strive ahead seeking the best wishes of our colleagues and peers , ably supported by our friends and physicians who entrust us with their patients orthopedic problems and referrals.

I take this opportunity to wholeheartedly thank them for their unstinting support as we take MIOS to newer heights under able guidance of our visionary chairman Dr. Alok Roy who's friendly pat on the back enthuses energy behind my vision of integrated Orthopedic Services in all our group Hospitals.



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Old Malunited Stress Fracture Proximal Tibia with Osteoarthritis knee: How We Managed the case



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Introduction

Neglected osteoarthritis of knee usually leads to varus deformity of lower limb. Varus deformity produces abnormal loading of tibia. Repeated abnormal stress leads to stress fracture of the proximal tibia. Non operative treatment of stress fracture with associated osteoarthritis and varus deformity usually leads to malunion at the fracture site, thus deforming the limb further. Corrective osteotomy of tibia vara with fixation along with modular total knee replacement with long tibial stem not only addresses the osteoarthritic joint but also restores normal limb alignment and allows the fracture to heal in a biomechanically favourable situation.

Case details

A 59 year old female presented with bilateral knee pain (left>right) for last 8 years with severe varus deformity of both lower limbs (Fig 1). She had a history of stress fracture left tibia 12 months back for which she was treated conservatively elsewhere. She was able to stand with difficulty, but could not walk more than 10 metres at a stretch. On examination, there was medial joint line tenderness of both knees along with palpable crepitus. Range of motion of the right knee was from 0 to 120 degrees of flexion while that of the left knee was from 10 to 90 degrees. Both lower limbs were in varus deformity (right - 30 degree, left- 50 degree) with significant tibia vara on the left side (Fig 1). There was grade 1 medial collateral ligament laxity. Scanogram and radiographs revealed grade 4

osteoarthritis of bilateral knee with old healed fracture of proximal tibia of left side (Fig 2). The stress fracture had malunited resulting in significant tibia vara on the left side (Fig 3).



Fig 1: Clinical picture showing severe varus deformity both legs (left>right)



Fig 2: Scanogram showing varus limb alignment



Fig 3: Radiograph anteroposterior view showing bilateral osteoarthritis with malunited proximal tibial fracture with left tibia vara

Considering the fact that she was having more pain and deformity on the left leg, decision was taken to address it first. She was planned for a single stage surgery involving corrective osteotomy of the tibia vara with total knee replacement of the left knee. The salient features of the surgery were:

1. Fibulectomy was done first, wherein a piece of fibula was excised from middle 1/3rd (roughly equal to the wedge of tibia to be removed for correction). (Fig 4)
2. Tibial anterolateral wedge was removed from the fracture site to correct the tibia vara.(Fig 5)
3. The osteotomy site was fixed with 5 hole medial tibial locking plate with unicortical screws. (Fig 6)
4. Posterior cruciate ligament retaining total knee replacement was done with tibial extender to bypass the osteotomy site via medial parapatellar approach. (Fig 7)
5. The bone cuts retrieved during total knee replacement was used to graft the osteotomy site.

The patient was started on immediate knee bending with quadriceps strengthening exercises and supported weight bearing walking. Her range of motion of left knee is from 0 degrees to 90 degrees. The alignment of left lower limb has been restored to normal (around 5 degree valgus).

Conclusion

Varus deformity of the lower limb due to osteoarthritis of knee should be addressed early so as to prevent stress fracture. A stress fracture if incurred should be

treated adequately. Inadequate treatment might lead to a deformed limb which increases the quantum and complexity of surgery, required later on.



Fig 4: Clinical picture showing fibulectomy



Fig 5: Clinical picture of tibial wedge removal



Fig 6: Tibial osteotomy fixed with plate and unicortical screws



Fig 7: Post op radiograph showing correction of deformity and normal limb alignment



L to R (standing): Dr. Daipayan Chatterjee, Dr. Kaustabh Debnath, Dr. Soham Mandal, Dr. Sudipto Sarkar, Dr. Shamik Hait, Dr. Dipak Kanti Biswas, Dr. Pravin Ramdas Gaikwad, Dr. Mahak Baid, Dr. Asish Kumar Mandal (seated): Dr. Sutanu Hazra, Dr. Vikash Kapoor, Dr. Anirban Chatterjee

Radio-Frequency Ablation a Curable Mode of Treatment in Osteoid Osteoma - A Case Report



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Introduction - Osteoid osteomas are benign bone forming tumours commonly occurring in the first two decades of life. Their treatment options for such bone tumours can be either non-operative with observation and analgesics or operative with radio-frequency ablation or surgical resection.

Case Report - We present a case of a 5 years old male child. He presented with complaints of pain in the proximal part of left thigh and limp of 6 months duration. Pain was insidious in onset and gradually progressive in nature, more during the night time and was relieved by medication. There was no history of any trauma or any fever. On examination the pain was localised over the inner aspect of the left thigh, slight swelling and tenderness was present. Full Range of motion of the hip and knee joint was noted. Distal Neurovascular Status was within normal limits. Radiographs of the proximal femur demonstrated a lytic lesion surrounded by a zone of sclerosis (Fig.1). A differential diagnosis of Osteoid Osteoma and Osteomyelitis (Brodie's abscess) was conceived. Further confirmation by Ct scan was done (Fig.2).



Fig 1: Radiograph showing lytic lesion in the proximal femur

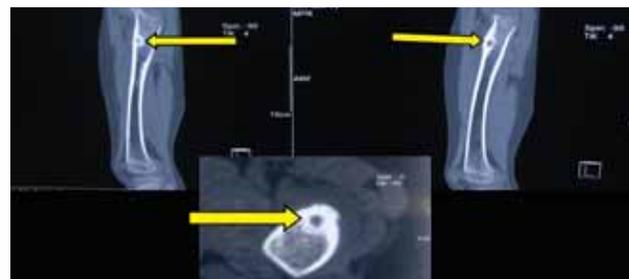


Fig 2: Ct scan showing a lytic nidus surrounded by a sclerotic zone

Management options included

- 1) **Non-operative** – clinical observation and NSAIDs indicated for painful spine lesions without associated scoliosis
- 2) **Operative** – Percutaneous Radiofrequency ablation - Indicated for those with failure of medical management, periarticular lesions, increased risk of cartilage injury, - Surgical resection – for lesions not amenable to radiofrequency ablation

Patient was managed by minimally invasive approach to the lesion. Curettage of the lesion at the proximal end of left femur alongwith radiofrequency ablation (Fig 3,4) was done and the specimen was sent for histopathological examination. The patient was pain free immediately after the operation. HPE revealed a grey brown tissue 0.5 x 0.5 cm in dimension, tumour composed of osteoblasts lying in a vascular fibrous connective. No inflammation was seen, Thick layer of dense bone was noted in the surrounding area, however no evidence of malignancy was noted. (Fig 5) Thus the diagnosis of Osteoid Osteoma was confirmed.



Fig 3: Position of guide wires for RFA



Fig 4: Position of RFA probe and confirmation of its position using image intensifier



Fig 5: Histopathological findings



Fig 6: Post operative radiograph AP view



Fig 7: Post operative radiograph lateral view

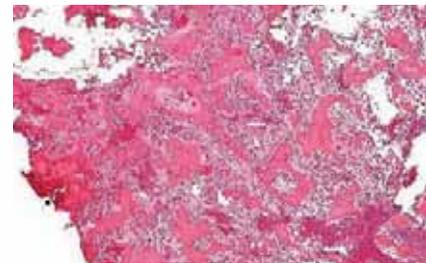


Fig 8: 6 month Follow up clinical picture showing the scar

A follow up radiograph at 6 months demonstrated healing osteolytic lesion and the patient was symptom free. (Fig. 6,7,8)

Discussion – Osteoid osteomas are benign bone forming tumours. They have characteristic lucent nidus <2 cm and surrounding solid periosteal reaction and classically cause night-pain that is relieved by the use of salicylates, e.g. aspirin. The tumour can be in any bone in the body but are most common in long bones, such as the femur and tibia. They account for 10 to 12 percent of all benign bone tumours. Osteoid osteomas may occur at any age, and are most common in patients between the ages of 4 and 25 years old. Males are affected approximately three times more commonly than females.

Conclusion - Radiofrequency ablation is a simple,

minimally invasive, safe and effective established technique for the treatment of osteoid osteoma and can be regarded as the treatment of choice for most of the cases.

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Correction of Genu Valgum by Hemiepiphysiodesis Using 8-Plate - A Case Report



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Introduction: Malalignment of mechanical axis of lower limb around the knee leads to biomechanically unacceptable mechanical load on the knee joint thus predisposing to early osteoarthritis. Therefore, prophylactic surgical correction is necessary, depending upon the age and degree of deformity. Corrective osteotomies are commonly performed in adult patients while skeletally immature patients may require less invasive surgical techniques such as permanent or temporary hemi-epiphyseodesis. Permanent hemi-epiphyseodesis relies on exact calculation of remaining growth and perfect timing of the surgical procedure. Temporary epiphyseodesis is partially reversible and may be performed at an earlier age. Once the hardware is removed, there is a resumption of growth. The correction is achieved through the process of “growth modulation or guided growth”.

Case Details: A 10 yr old girl presented with gradually



Fig 1: Pre-operative clinical photograph showing bilateral genu valgum with intermalleolar distance of 12cm.



Fig 2: X-ray of (R) elbow joint to determine skeletal age by Souvegrain's method, showing partial closure of olecranon physis i.e. girl was 12 years of skeletal age.

progressive bilateral genu valgum. For last 5 months, she was having pain while walking and climbing stairs. There was no h/o of any deformity since birth, trauma or fall prior to onset of symptoms, anorexia, fever or wt loss or similar family history & no abnormality was detected in any other part of the body.

On examination, there was bilateral genu valgum, deformity disappears on flexion of the knee, inter-malleolar distance (IMD) of 12cm. There was no generalised ligamentous laxity and no change in IMD in standing and supine position (Fig. 1). X-ray of right elbow joint (Fig. 2) was done to determine skeletal age by Souvegrain's method. Scanogram of both lower limbs (Fig. 3) revealed valgus deformity bilaterally (Right - 20 degree and left - 30 degree).



Fig 3: Pre-operative scanogram of both lower limb standing AP view to denote amount of mechanical axis deviation (MAD) for pre-operative planning.



Fig 4: Post-operative x-ray of both knee joint AP view shows correct position of 8-plate



Fig 5: Post-operative x-ray of both knee joint LAT view shows accurate position of 8-plate

After getting all investigations and counselling of the parents, bilateral distal femoral (medial) temporary hemiephysiodesis by using 8 plate was done (Fig. 4 & 5). Immediate full weight wearing walking along with quadriceps strengthening and knee bending exercises was allowed. She was followed up at 2 weeks, 6 weeks, 3 months, 6 months, 9 months and 1 year. At 1 year follow up limb alignment was corrected with genu rectus. Scanogram of both lower limbs repeated at 6 month and 1 yr (Fig. 6) follow up.



Fig 6: 6 month & 1 year post-operative scanogram of both lower limb AP view shows full correction of deformity bilaterally.

Removal of implant was done at 1yr (Fig. 7) and now she is at 8 months of follow up (after removal of implant). A scanogram (Fig. 8) was done and clinical photograph

(Fig. 9) also taken, to reveal that there is no recurrence of deformity and mechanical axis of both lower limbs is maintained.

(Fig. 9) also taken, to reveal that there is no recurrence of deformity and mechanical axis of both lower limbs is maintained.

Discussion: Temporary hemi-epiphyseodesis can also be achieved by using physeal staples. However, several surgical complications such as hardware breakage, migration & physeal bar formation have been reported. To reduce these complications, a new device known as 8 plate has been introduced, which is an extraperiosteal plate fixed by two non-locking screws, that serves as a “tension band plate” restraining the physeal growth. The 8-plate applies a tether only at the periphery of the physis, thus allowing guided growth based on tension band principle assuring effective correction and causes fewer complications than physeal stapling.



Fig 7: X-ray of both knee joint after removal of implant at 1 year shows no complications like physeal bar formation etc.



Fig 8: 8 months post-removal of implant scanogram of both lower limb AP view showing maintenance of full correction without any recurrence



Fig 9: 8 months post-removal of implant clinical photograph to check the normal attitude of both lower limbs without any residual deformity.

Conclusion: Bilateral genu valgum is a common limb deformity in children, mostly idiopathic. Children above 10yrs of age and with more than 10 cm of intermalleolar distance needs operative management. Growth modulation by temporary hemiepiphysodesis by using 8-plate for correction of deformity has advantages like simple extraphyseal instrumentation and flexibility to act as a tension band (focal peripheral hinge). However, proper selection of patient along with regular follow up is of utmost importance to achieve a good functional outcome.



(L to R): Jianthai, Shrabani, Jaya, Paramita, Avipsa, Binota

Haemodialysis Unit at BMMSH

The dialysis unit at Bhagwan Mahavir Medica Superspecialty Hospital, Ranchi was started two years back with ten dialysis machines. In the first month, we had done 230 hemodialysis sessions. Over a period of two years, this number has risen to 1400 sessions per month as on date. We have increased the number of machines to 21, including three machines for different ICU's, and one machine dedicated for HBsAg-positive patients. We are planning to get a SLED (Slow Low Efficiency Dialysis) machine for critically sick patients in the near future.



The RO water quality at our dialysis unit is at par with the international guidelines. We have dedicated, trained and skilled technicians, who are the backbone of our dialysis unit. The infrastructure of dialysis unit is modern, with separate television sets for each patient. A separate procedure room is available. Procedures like Doppler guided neck line insertion, PERMACATH insertion, AV Fistula creation and AV graft insertion are regularly carried out at our unit. Night time coverage is provided with emergency dialysis facilities.

Comminuted Radial Head Fracture Treated with Radial Head Replacement - A Case Report



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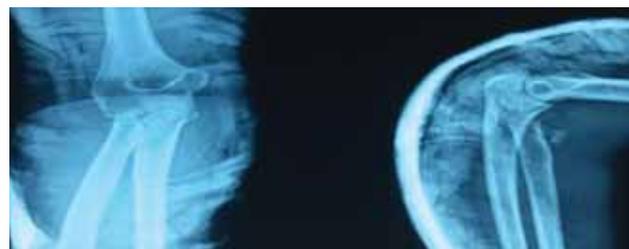
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Introduction: Radial head fractures occur in about 17–19% of cases of elbow trauma and account for 33% of all elbow fractures. In general, the treatment of radial head fractures is based on the fracture type and the presence of any associated injury. The surgical options for complex fractures include fixation, excision, and replacement of the radial head. As excision of the radial head has a high complication rate like wrist pain, fixation and radial head prosthesis replacement have been used in the treatment of complex radial head fractures in recent years.



(Fig 1A) - pre-operative x-ray of right elbow showing comminuted radial head fracture with posterior dislocation of elbow

Case Report: A 47 year old, housewife with right hand dominance presented with pain and reduced movement of right elbow with alleged history of fall from rickshaw 5 days back. At local hospital she was initially misdiagnosed as a case of simple posterior dislocation of elbow (Fig. 1A) and closed reduction was done (Fig. 1B). But careful radiological examination revealed that there was also associated comminuted radial head fracture.



(Fig 1B) - Post-reduction x-ray showing reduced elbow with comminuted radial head fractures.

Patient was admitted and routine blood investigation was done. CT scan was done to exclude other bony injuries and to measure canal diameter of proximal radius. On CT scan, Comminuted radial head fracture with displacement (Mason Type IV) was confirmed (Fig. 1C).



(Fig 1C) - Pre-operative CT scan showing Mason type IV Radial Head Fracture.

Pre Anaesthetic check up was done and radial head replacement surgery was planned. Surgery was done by using Kocher's lateral approach. Radial head was removed by excision and fracture pieces were arranged in its anatomical position (Fig. 2A). Radial head size and thickness was measured by Calipers and according to which prosthetic head size was chosen. Radial neck was prepared followed by



(Fig 2A) - Per-operative picture showing excised radial fragments were reconstructed in back trolley.

implantation (Fig. 2B) of metallic fenestrated stem of Radial Head Prosthesis (OSCAR BIOTEK, size 1). After reducing radial head (Fig. 2C), there was no valgus instability or linear translatory movements intra-operatively.



(Fig 2B) - Per-operative picture was taken just before insertion of radial head prosthesis.



(Fig 2C) - Per-operative picture was taken after insertion of prosthesis and showing congruent reduced radio-capitellar joint.

Post-operative x-ray was taken (Fig.3) on the next day and Suture removal was done after 2 weeks. Active assisted movement was started after 3 weeks from operation. At the end of 8 weeks, patient was allowed light functional tasks. Radiological (Fig. 4) and functional evaluation (Fig.5A-5D) was done at final follow up at 1 year .She had full range of movements (flexion 0 - 160° ,80° of pronation and



(Fig 3) - Immediate post-operative x-ray showing prosthesis in situ with perfect alignment.



(Fig 4) - X-ray at 1 year follow up showing no prosthesis loosening or joint erosion and good alignment.

supination each). Functional improvement was evaluated by Mayo elbow performance score (MEPS) and she had "Excellent" MEPS (score 95 out of 100) at the end of 1 year.

Discussion: Radial head arthroplasty is indicated for comminuted radial head fractures that cannot be managed reliably with fixation. Prosthesis replacement ensures stability and mobility of elbow. Biomechanical studies have demonstrated that metallic implants restore elbow stability to a level similar to that of the native anatomical radial head when a fracture of the radial head occurs in combination with dislocation of the elbow. Newer modular radial head designs have improved sizing to better reconstruct the anatomy of the proximal radius and they are easier to insert intra-operatively. However over stuffing of the Radio capitellar joint must be avoided, as it may produce capitellar erosion and restrict elbow movement.



(Fig 5) - (Functional evaluation at 1 year follow up); 5A- 5D – full range of movements, flexion, extension, pronation and supination respectively.

Healthy Eating for Asian Indians



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Asian Indians (people of Indian origin residing in India or in other countries) have undergone a rapid lifestyle change with increase in affluence, urbanization and hectic routines.

The result has been a drastic change in food habits arising out of irregular mealtimes, easy availability of convenience foods (Fast Foods), improper snacking apart from a reduction in energy expenditure.

Probably the biggest threat today is the increased consumption of Fast Foods- essentially energy-dense foods prepared either by deep frying or with pre-cooked ingredients, high in SFA, salt and

preservatives. Such foods have low nutritive value, are lacking in fibre and give rise to the formation of free radicals in our bodies which are responsible for several Degenerative Diseases. There has also been an alarming increase of the intake of carbonated sweetened beverages, sugar and refined flour products.

This nutritional transition have led to the increase in Obesity and Non-communicable diseases(NCDs), predominantly in urban but not unheard of in rural areas. The change in food intake is clear from the table given below.

Table 1. Secular Trends of Nutrient Consumption in India

Product	Average values ^a		
	1979–1981	1989–1991	1999–2001
Total animal product	120	163	196
Animal fat	23	28	47
Eggs	3	5	6
Sea Food	5	7	8
Meat	16	20	22
Milk-excluding butter	71	102	111
Total vegetable product	1,963	2,202	2,296
Alcoholic beverages	5	8	11
Cereals	1368	1508	1470
Fruits	31	34	51
Oil crops	25	37	43
Pulses	120	133	109
Rice (milled)	670	779	751
Starchy roots	41	40	49
Sugar and sweeteners	193	221	247
Sugar crops	8	9	11
Vegetable oils	127	158	239
Vegetables	32	35	45
Wheat	390	461	493
Grand total	2,083	2,365	2,492

Data are obtained from the Food and Agricultural Organization Database (FAOSTAT).²

^a All variables expressed in the unit calories/capita/day.

Table 2. Differences in Physical Activity Among Asian Indians Versus Whites/Europeans

Study	Ethnic group	Physical activity criteria/parameter	Asian Indians	Whites/ Europeans
Mohanty et al.	Asian Indians (n == 555), non- Hispanic whites (n=87,846)	Reporting vigorous activity	33%	40.7%
Shaukat et al.	Asian Indians (n= 89), Caucasians (n= 82)	Physical activity index	8.5 ^a	13.7
Dhawan et al.	Asian Indians (n=80), Caucasians (n=82)	Exercise for at least 20 min once a week	17%	34%
Petersen et al.	Asian Indians (n=49), Caucasian children (n=292)	Physical activity index	2.1 ^a	2.3

^a Unit not given as this is a ratio

Obesity and Metabolic Syndrome are immediate precursors of T2DM and CVD. The severity of Insulin Resistance and related cardiovascular mortality are higher in Asians than Caucasians. These factors have necessitated the need to revise the dietary guidelines of the Asian Indian population. Originally prepared by NNI, Hyderabad in 1998, a revision was done in 2009 by doctors and nutrition experts at the 'Consensus Meet', held in Delhi.

Some of the excerpts are as follows –

Dietary Guidelines For Asian Indians:

A. Energy: The recommended energy should be adequate to maintain ideal weight and health in adults. If body weight and physical activity of an individual are known, it is easy to calculate the extra needs of energy for a particular situation. In the case of energy, the RDA represents only the average daily requirement corresponding to daily average expenditure of an individual.

B. Carbohydrates and Fibre:

1. Eat complex carbohydrates with low GI instead of simple sugars or high GI carbohydrates.
2. Eat high fibre foods.
3. Quantity and quality of carbohydrates are equally important in the daily diet

C. Fat:

1. The lower limit of fat should be adequate for the energy needs (15% of total energy), should prevent essential fatty acid deficiency (LA, 3% of total energy; ALA, 0.5%of total

energy), and should facilitate optimal absorption of fat-soluble vitamins.

2. High levels of SFAs and TFAs promote Dyslipidaemia and Atherosclerosis

D. Protein:

1. Optimal protein intake is required for healthy growth and prevention of protein malnutrition.
2. Utilization of protein only occurs with a diet adequate in micronutrients.

E. Salt: Consumption of salt should be restricted in accordance to currently prevailing international guidelines.

1. Salt intake should be less than 5 g of sodium chloride (or about 2 g of sodium)/day.
2. Addition of extra salt at the dining table should be avoided.
3. Dietary intake of sodium from all should be limited. Avoid processed foods that have high salt content.

F. Sugar and Artificial Sweeteners: Intake of simple sugars should be restricted.

1. Free sugars should be less than 10% of total calories/ day, which includes all added sugars and sugars present in honey, syrups, and fruit juices.³¹
2. Alternatives to sweetened beverages can be water, skimmed buttermilk, tender coconut water, and low fat milk.

G. Other Dietary Habits:

Water: An individual should have 1.5–2 L (8–10 glasses) of water every day; intake could be increased in hot climates.

Food choices while eating out:

1. Choose healthy snacks.
2. Follow the healthy dietary guidelines while eating out.
3. Smaller-sized portion should be preferred.
4. Avoid sweetened carbonated drinks and commercially available high calorie drinks and opt for beverages like buttermilk, coconut water, fresh lime with water, etc.

Meal portion and times:

1. Small frequent meals at regular intervals should be taken.
2. The gap between two meals should be 3–4 hours.

Regular breakfast: A healthy regular breakfast should be an essential part of the meal plan.

Conclusion:

Although these guidelines are applicable to all Asian Indians globally, they are particularly targeted at the urban and semi-urban population.

Proper use of these guidelines will help in controlling the epidemics of our times, viz T2DM, CVD & Metabolic Syndrome.

An emergency approach versus casualty



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19 yrs, male patient brought to ER with history of fall from bike (pillion rider) when it collided with a car, following which injured his lower back around 5 days back. Immediately he c/o inability to feel and move his left leg. Initially the patient was treated in a local corporate hospital and he regained some sensation and movement in the left leg after some duration the same day. So, he was discharged from there after initial treatment, conservative management and with a normal pelvic X-ray as advised by ER at that Hospital.

In next 3-4 days he experienced gradual numbness and paresis in left leg and was rushed to Medica

ER with sudden unbearable pain at his back. In the ER patient maintained hemodynamic stability with a raised HR may be due to pain and apprehension. Initial vitals were-BP 130/70 mmHg. HR-93/min, RR-20/min, Spo2-100 %.

We proceeded with the detailed systemic examination. Head to toe examination revealed no abnormality except in the detailed.

Neurological examination

Higher functions –WNL, Motor power-Upper limbs B/L 5/5, Lt LL 2-3/5 power (distal worse than proximal).

B/L clonus and brisk LL reflexes. Sensory & JPS are largely unaltered—intact, Bladder bowels were intact, DTRs (LL)- mild exaggerated with normal tone of muscle. There was no involvement of bladder and bowel. LOG ROII not done with suspicion of spinal cord injury with fracture of vertebra.

Hence in view of that our ER Team advised a CT & MRI which revealed multiple # of D4, D5, and L4 with spinal injury. The patient was admitted under MIND team.

ER management was conservative with absolute bed rest, IVF, PPI, anti emetics, Dexamethasone, DVT prophylaxis after discussion with neurosurgery team.

Investigation:

On next day, there was an unexplained hypernatremia (Na-163 meq/L). After detailed discussion with Radiologist regarding the MRI, it was speculated that D6 may be a congenital hemi vertebra along with extra dural hematoma causing cord compression. Besides that L4 vertebra showed collapse. At that point, thoracic and lumbar spine with 3D reconstruction and also a contrast MRI-dorsal

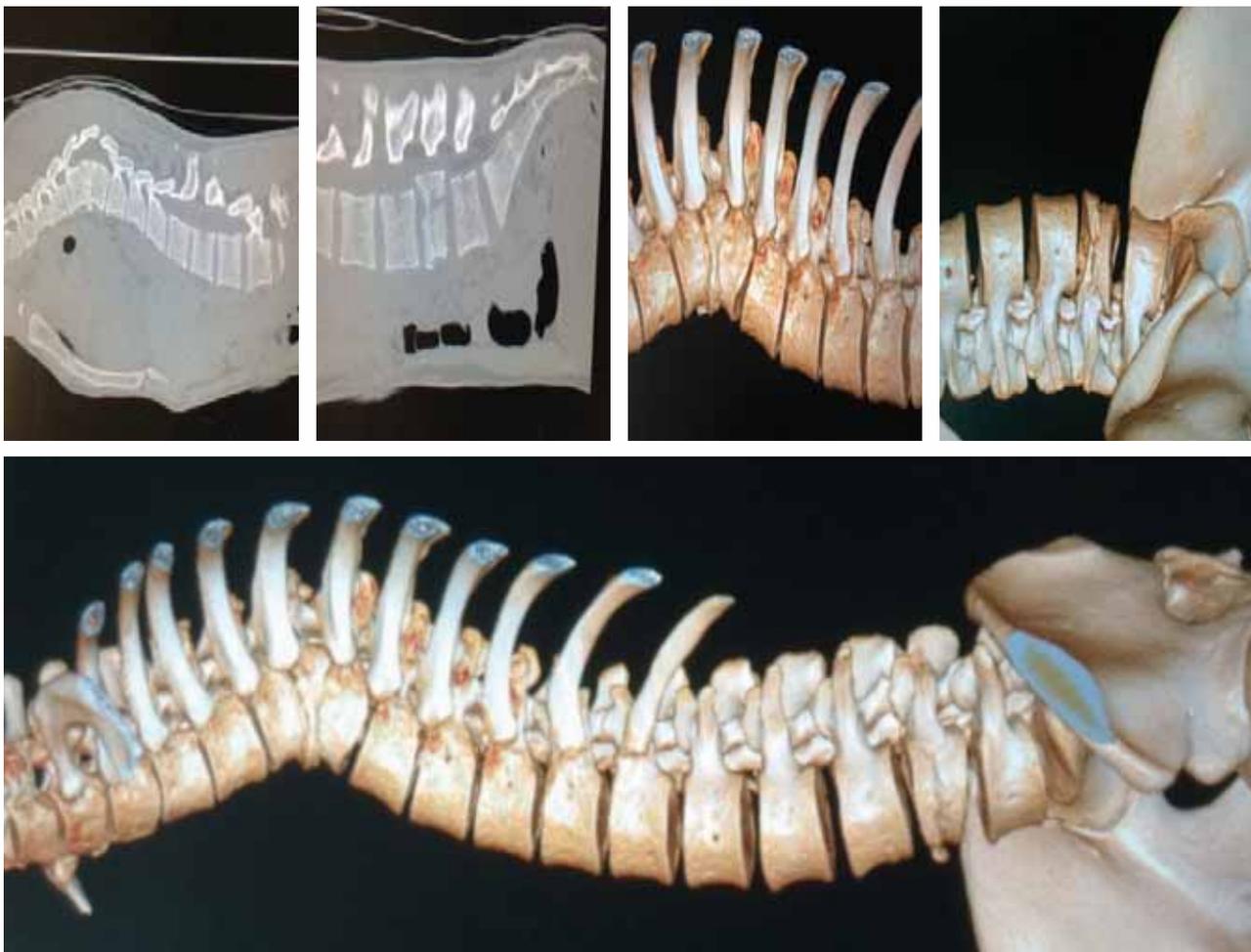
spine and review. All the reports confirmed a dorsal extradural hematoma (congenital kyphosis and D6 hemi vertebra); burst fracture of L4 with retropulsion and canal compromise. By that time serum Na level came back to normal.

Treatment:

After a discussion with the family members and once they had given consent, D4, D5, D6 laminectomy & evacuation of hematoma.L3, L5 decompression and pedicle screw fixation under GA was done on the next day. Post-operative patient's condition was stable and he was symptoms free.

This case is unique in terms of diagnosis with a detailed history and thorough systemic examination and the take home message is ER physicians should always keep in mind the importance of complete and exclusive neurological survey in all trauma cases with a history of neuro deficit and should do the imaging accordingly.

So no more casual approach in Emergency is welcome



Environmental and Social Governance in Healthcare - Medica's Initiative



Medica Superspecialty Hospital, Kolkata

Introduction:

For the first time in eastern India, as a leading healthcare set up, Medica Hospitals Pvt Ltd (MHPL) has developed the Social and Environmental Management System (SEMS) at a corporate level to manage environmental, health & safety and social impacts that may arise due to their existing and proposed activities for their healthcare facilities. The SEMS includes the Corporate Environmental and Social Policy, risk assessment processes as well as a description of the enabling mechanisms, management tools, assessment tools and operating procedures.

The SEMS demonstrates a corporate commitment to manage MHPL's operations in line with local and national statutory norms and regulations and to incorporate international standards such as the IFC Performance Standards (2012) and IFC/World Bank Environment, Health & Safety guidelines for healthcare facilities.

Scope of the Social and Environmental Management Framework at Medica:

The intent of the Medica SEMS includes:

- ⌘ To identify and understand the applicable standards within which the SEMS will be implemented;
- ⌘ To adopt social and environmental policy commitments at a Corporate level;
- ⌘ To continually assess the implications of the MHPL Social and Environmental Policy for proposed greenfield healthcare facilities or to acquire existing brownfield hospital assets and to operate these;

- ⌘ To provide a risk assessment and management process that will enable MHPL to identify the environmental, health & safety and social impacts and to plan for the proposed mitigation for all existing and proposed healthcare assets;
- ⌘ To standardize non-clinical procedures that may result into environmental and social impacts across MHPL's healthcare assets; and
- ⌘ To adopt principles of stakeholder engagement and grievance redressal that can be consistently applied across customer facing, customer feedback and overall community development.

Parameters Used for Effective Social and Environmental Management System:

Medica Group of Hospitals have complied with the following parameters in effort to implementation of effective Social and Environmental Management System-

1. Applicable Standards(IFC 2012, NABH, NABL, ISO & OSHA)
2. Social and Environmental Policy
3. Institutional and Organisational Structure
4. Environmental and Social Screening Process
5. Environmental and Social Risk Management Procedures
6. Emergency Response and Preparedness
7. Public Consultation and Engagement
8. Monitoring and Evaluation
9. Internal and External Reporting(Assessments & Audits)

Monitoring Tools & Technique:

As per IFC Performance Standards Framework 2012, the following monitoring tools have been used by Medica to comply with ESG (Environmental & Social Governance)-

1. Relevant SOPs and Departmental Manuals of Medica Group
2. Policies for Medica group
3. Guidance on Building Design Considerations
4. Legal Compliance
5. Training Program and Schedule
6. Vendor and Supplier Selection
7. Grievance Management
8. Internal & External Audit Reporting
9. Annual Environmental & Social Monitoring
10. E&S Risk Screening (HIRA)
11. Environmental and Social Management Plan
12. Occupational Health & Safety Risk Assessment
13. Complaint Register/Grievance
14. Air Quality Management (Management of Air Handling Units (covering management of DG sets stacks, boiler chimneys, scavenger units).
15. Bio-medical Waste Management
16. Solid and Hazardous Waste Management
17. Water Use and Wastewater management
18. Contractor Management (Contractor Management-across all departments including housekeeping, F & B, Environmental & Social Considerations for Vendor and Supply Chain Management).
19. Energy Management and Design based Practices
20. Emergency Response Plan, Disaster Readiness and Fire Safety
21. Occupational Health & Safety for Construction, Operation and Decommissioning of Hospital Units

Description of few key Environmental and Social Issues and Mitigation by Medica Group:

Medica has implemented measures to address the environmental and social impacts for its hospitals and has presented plans to address the E&S issues and impacts to ensure that the proposed project will upon implementation of the specific agreed measures, comply with the environmental and social requirements, including: the host country laws and regulations; IFC's Performance Standards; NABH Guidelines and the relevant EHS guidelines for Health Care Facilities. The information about how these potential impacts will be addressed by the Company is summarized in the following matrix

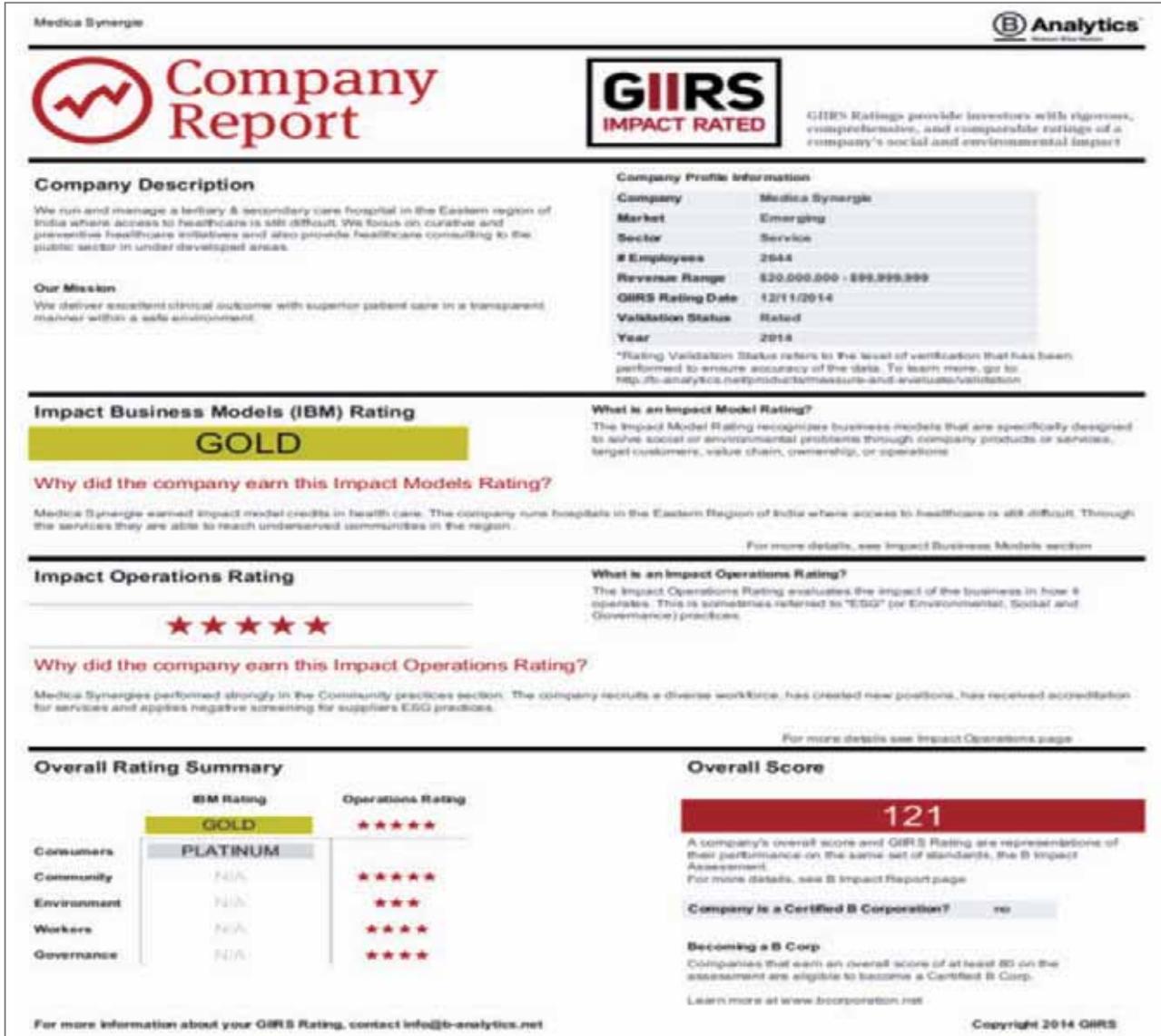
S. No	Parameter	Monitoring effort by Medica
1	Legal register	This describes all the applicable legislations, acts, guidelines, permits and approvals under the local as well as international legislations
2	Training Program and Schedule	This tool defines the requirements of training of various personnel across the different departments towards environment, health and safety, fire safety, Labour issues etc. It will also describe the suggested annual training schedule for the staff, employees and the E& S Officers
3	Vendor and Supplier Selection	This tool broadly provides the contractor evaluation and selection procedure along with the checklist to draw a clear line of identification of vendors based on their adherence to the E& S issues and standards
4	Grievance handling	This tool is used to record the complaints/suggestions and grievances received
5	Internal Audit Reporting	This template has enabled the ESG Committee at the subsidiary level to periodically monitor the implementation of the SEMS at their facility

S. No	Parameter	Monitoring effort by Medica
6	External Audit Terms of Reference	This template has enabled the SEMS Committee/ SEMS Manager at the MHPL to periodically monitor the implementation of the SEMS at their facility
7	Annual Environmental & Social Monitoring	This template will provide a platform to describe MHPL's business and initiatives across its operations and provide a fact sheet of all its existing and future ventures for the investors
8	E&S Risk Screening	Medica has developed a thorough checklist ,which is used at the preliminary stage by MPC to identify all the environment and social issues/risks related to any new project development or investment in any existing facility undergoing repair
9	Template for an Environmental and Social Management Plan	This enables the ESG Committee to monitor the implementation of the ESG matrix
10	Occupational Health & Safety Risk Assessment	This template defines certain parameters and key indicators as described in the SOP to monitor the compliance to the OHS (Occupational Health & Safety) aspects
11	Patient Complaint Register/ Grievance	This has included the various indicators to understand the complaints/suggestions/grievances of the patients, their relatives /staff and workers
12	Air Quality Management	This describes various Air pollution sources, their control measures and management of DG sets stacks, boiler chimneys, scavenger units and also Management of Air Handling Units
13	Bio-medical Waste Management	This describes the various BMW wastes generated by MSPL operations and define the compliance requirements and accordingly provide a procedure for collection, segregation , treatment and disposal of the waste
14	Solid and Hazardous Waste Management (SHW)	This describes the various SHW generated by MSPL operations and define the compliance requirements and accordingly provide a procedure for collection, segregation , treatment and disposal of the waste
15	Water Use and Wastewater management	This describes the sources of raw water, water consumption across various departments, water balance diagram and wastewater generated by MHPL operations and define the compliance requirements and accordingly provide treatment mechanism and procedure
16	Contractor Management	This describes the various contractors involved under MSPL operations across all departments including housekeeping, F&B etc., and management of Environmental & Social Considerations for Vendor and Supply Chain Management
17	Energy Management and Design best Practices	This describes the requirement for HCF Design Considerations in designing or renovating layout of hospital units (this will need to be done by the P&C team
18	Emergency Response Plan, Disaster Readiness and Fire Safety	This basically integrates all the existing SOPs for Disaster Readiness, Emergency Response and Fire Safety and the implementation across MSPL
19	Occupational Health & Safety for Construction, Operation and Decommissioning of Hospital Units	It describes the associated risks and hazards with respect to occupational health and safety through the entire project lifecycle and the control and management measures

Medica's Success Story and achievement on ESG:

Against a market average score of 84 points, Medica has scored 121 points and a Gold rating (Impact Business Model Rating). Over the last few years, the importance of a company's environmental and

social impact has increased substantially amongst institutional investors globally. Hence, ensuring highest standards for ESG related matters would help the company in the future. We should therefore try and address the gaps in the current report to get a much better rating going forward.



Medica Synergie **B Analytics**

Company Report

Company Description

We run and manage a tertiary & secondary care hospital in the Eastern region of India where access to healthcare is still difficult. We focus on curative and preventive healthcare initiatives and also provide healthcare consulting to the public sector in under developed areas.

Our Mission
We deliver excellent clinical outcomes with superior patient care in a transparent manner within a safe environment.

GIIRS IMPACT RATED

GIIRS Ratings provide investors with rigorous, comprehensive, and comparable ratings of a company's social and environmental impact

Company Profile Information	
Company	Medica Synergie
Market	Emerging
Sector	Service
# Employees	2644
Revenue Range	\$20,000,000 - \$99,999,999
GIIRS Rating Date	12/11/2014
Validation Status	Rated
Year	2014

*Rating Validation Status refers to the level of verification that has been performed to ensure accuracy of the data. To learn more, go to <http://b-analytics.net/product/measure-and-evaluate/validation>

Impact Business Models (IBM) Rating

GOLD

Why did the company earn this Impact Models Rating?

Medica Synergie earned impact model credits in health care. The company runs hospitals in the Eastern Region of India where access to healthcare is still difficult. Through the services they are able to reach underserved communities in the region.

For more details, see Impact Business Models section

What is an Impact Model Rating?

The Impact Model Rating recognizes business models that are specifically designed to solve social or environmental problems through company products or services, target customers, value chain, ownership, or operations

Impact Operations Rating

★★★★★

Why did the company earn this Impact Operations Rating?

Medica Synergie performed strongly in the Community practices section. The company recruits a diverse workforce, has created new positions, has received accreditation for services and applies negative screening for suppliers ESG practices.

For more details see Impact Operations page

What is an Impact Operations Rating?

The Impact Operations Rating evaluates the impact of the business in how it operates. This is sometimes referred to "ESG" (or Environmental, Social and Governance) practices.

Overall Rating Summary

	IBM Rating	Operations Rating
Consumers	GOLD	★★★★★
Community	N/A	★★★★★
Environment	N/A	★★★★
Workers	N/A	★★★★★
Governance	N/A	★★★★★

For more information about your GIIRS Rating, contact info@b-analytics.net

Overall Score

121

A company's overall score and GIIRS Rating are representations of their performance on the same set of standards, the B Impact Assessment. For more details, see B Impact Report page

Company is a Certified B Corporation? No

Becoming a B Corp
Companies that earn an overall score of at least 80 on the assessment are eligible to become a Certified B Corp. Learn more at www.bcorporation.net

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References:

IFC (Indian Finance Corporation) Performance Standards (2012)

Performance Standards	Specific Areas
Performance Standard 1	Assessment and Management of Environmental and Social Risks and Impacts
Performance Standard 2	Labour and Working Conditions
Performance Standard 3	Resource Efficiency and Pollution Prevention
Performance Standard 4	Community Health, Safety and Security
Performance Standard 5	Land Acquisition and Involuntary Resettlement
Performance Standard 6	Biodiversity Conservation and Sustainable Management of Living Natural Resources
Performance Standard 7	Indigenous Peoples
Performance Standard 8	Cultural Heritage

Topic: Medium term follow up of open reduction of fracture dislocation of hip with fracture of femoral head



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A man aged forty years, presented from a neighbouring state with trauma to left hip and lacerated injury in his left eyelid after 4 (four) days of injury.

The initial x-rays, CT scans showed a dislocation of left hip with fracture of femoral head (Pipkin type) (Fig 1, 2). Evaluation by plastic surgeon was done and advised full thickness graft of his eyelid injury.



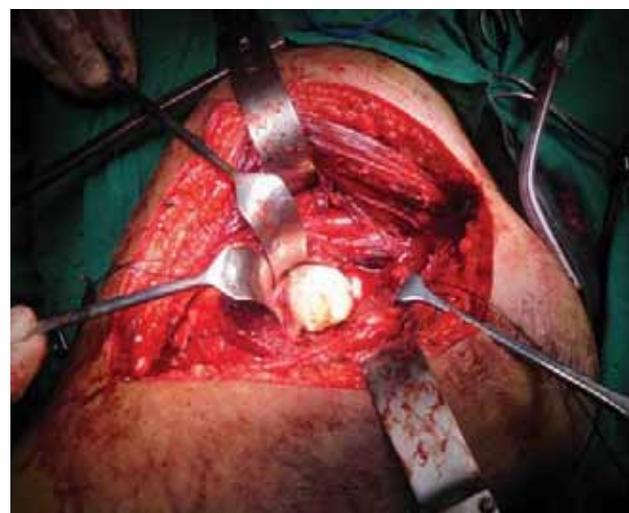
(Fig 1) Preoperative Xray



(Fig 2) Preoperative CT Scan

As far as the hip injury is concerned, this should actually be treated preferably within 6 to 12 hours of injury, otherwise the chances of avascular necrosis (AVN) of head of femur and subsequent arthritis remains very high. As the patient presented to us quite late (>96 hours) after the injury; there were options of reduction and fixation with guarded prognosis of AVN, or primary total hip arthroplasty. Considering the young age of the patient, option of fixation was decided with back up of arthroplasty. Emergent closed reduction was not done as the patient presented late and in fear of causing more damage to the head.

During surgery, the hip was meticulously reduced, (Fig 3), and after concentric reduction of fracture, fixation was done with cancellous screws and headless screws (Fig 4), Excision of fragment was not done as it was a large fragment. Peroperatively the range of motion was good and fracture stable. Post operative xrays were satisfactory. (Fig 5)



(Fig 3) Peroperative picture showing fracture



(Fig 4) Post reduction fixation with screws



(Fig 5) Post operative Xray

Patient was mobilized non weight bearing walking with assisted tolerable range of hip movements from the next day onwards and kept on supervised rehabilitation for next few days and regular follow up. The full thickness eyelid graft by plastic surgeon had also yielded good cosmetic results and normal eyelid function.

Close to one year on follow up, x-rays were good with no signs of AVN (Fig 6) patient presently has no



(Fig 6) Follow up xray- 1year

pain, almost full range of motion of hip (Fig 7,8) and is walking without any limp or support. His Harris hip score (a standardised score for evaluating hip function) is 94, which falls in the excellent category.

The literature search shows that in such delayed cases, the chances of AVN are very high which is usually evident in most cases within one year, but this case seems to have been different; even though we need to follow up for another couple of years at least before deeming it to be a rare case yielding such good results.



(Fig 7) Post operative function - 1 year - pic 1



(Fig 8) Post operative function - 1 year - pic 2

Importance of patient care with changes of pituitary function with ageing



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Case report:

Mr S K, a 68 year old gentleman presented to our emergency department with sudden onset severe headache with recurrent vomiting at 2 am. He had no h/o fever or visual impairment however.

On evaluation he was conscious, alert and oriented with GCS 15/15. He was restless due to pain. Extra ocular movement showed restricted motion but visual field was normal. Vitals were stable.

His CT scan with contrast showed increase enhancement of right side of sella with extension into right orbital Canal.

On further evaluation there was a h/o growth hormone producing adenoma, trans sphenoidal surgery was done in 2008. He remained asymptomatic till 2010. In November 2010 he presented with features of Pituitary apoplexy. He underwent stereotactic radiosurgery for residual tumour in 2012.

On regular follow up he had high hGh levels and repeat MRI showed tumour in the sella and right inferior orbital fissure. He underwent trans sphenoidal surgery in July 3015. His MRI in 2016 showed residual tumour and underwent stereo radio therapy.

He is on regular medication for secondary hypothyroidism and secondary hypocortisolism. He is under medication for hyperprolactinemia with twice weekly doses of Cabergolin, a dopamine agonist along with therapy for benign prostatic hyperplasia.

His MRI in our institute corroborated CT findings but also showed pituitary haemorrhage corroborating pituitary apoplexy.

He was treated conservatively with IV dexamethasone along with mannitol, diuretics and other replacement hormone therapy. As he had no visual impairment

he was not considered for any neurosurgical intervention. His symptom improved within next 48 hour and he was discharged home after about a week with consideration to start somatostatin analogue eg octreotide provided his financial issue suits him.

For a practicing physician high index of suspicion is key to diagnosis of emergency arising out of pituitary apoplexy and is lifesaving.

Discussion:

We all know pituitary gland has a role in puberty, reproduction, stress adaptive responses, sodium and water balance, uterine contraction, thyroid function, growth of an Individual and so forth. Ageing is marked by initially subtle erosion of physiological signalling mechanism resulting in blunted incremental secretory burst amplitude. Almost all pituitary hormone levels are altered by ageing.

The mechanism by which ageing influences pituitary function is complex. Presence of comorbidities or concomitant illness, underlying stress, body composition and sex modify pituitary secretion.

Hypopituitarism in ageing:

Hypopituitarism may be overlooked or confused with natural frailty in elderly individuals. Older patient like younger individual should be treated with lifelong replacement doses of cortisol, thyroxin, AVP When so indicated. Low initial thyroxin levels .025 to .05mg daily with gradual increments are preferred in elderly with myocardial ischaemia or cardiac arrhythmia. But one should be cautious regarding atrial fibrillation, bone loss and proximal myopathy with thyroid hormone.

Chronic replacement doses of steroid again causes similar side effects like bone loss, proximal myopathy and hyperglycaemia.

Pituitary tumour in ageing:

Ageing is associated with an increased prevalence of pituitary tumours. Lesions in older individuals often present silently (clinically nonsecretory and without mass lesions effects) or with hormone excess (Cushings disease or acromegaly), visual

impairment, headache and / or hypopituitarism. Transsphenoidal surgery remains the safe and cornerstone of therapy in older individuals with similar risk of CSF leak, meningitis, haemorrhage, tumour recurrence and hypopituitarism. Emergency arising out of pituitary haemorrhage or pituitary apoplexy should be detected and treated urgently. Every second counts, timely and orderly management is the key to treat such patients.

CoA Stenting Makes a Young Woman Feel Her Right Hand Pulse After 25 Years



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25-year old Ms. A's underwent a complex coarctation of aorta (CoA) stenting, and felt her right hand pulse after almost 25 years, at a city-based hospital.

Abia had symptoms of recurrent headache which gradually became more severe and unbearable.



One of her family doctors, found that her right hand pulse had absolutely no pulse! Her heart was beating, her left hand had a pulse, but strangely not her right hand! That is when they came to Medica Cardiology Department for further diagnosis and treatment, a hospital release said today.

Under the joint treatment of Dr. Sunip Banerjee, Director, Medica Institute of Cardiac Science (MICS) and Dr. Anil Singhi, Senior Consultant, Paediatric Cardiologist, Ms. A's primary problem was first diagnosed – CoA, or, in simpler terms, significant 'narrowing' of the main artery of the body. Aorta is the main artery of the body, which supplies oxygenated blood to our entire circulatory system. The 'narrowing' usually occurs after the starting of the left subclavian artery, which is one of the major arteries of the upper chest, supplying blood to the left arm.

Explaining Ms. A's case, Dr. Sunip Banerjee, Director, MICS, said that in the above mentioned case, the right subclavian artery, was originating after the coarctation (aberrant) thus severely compromising

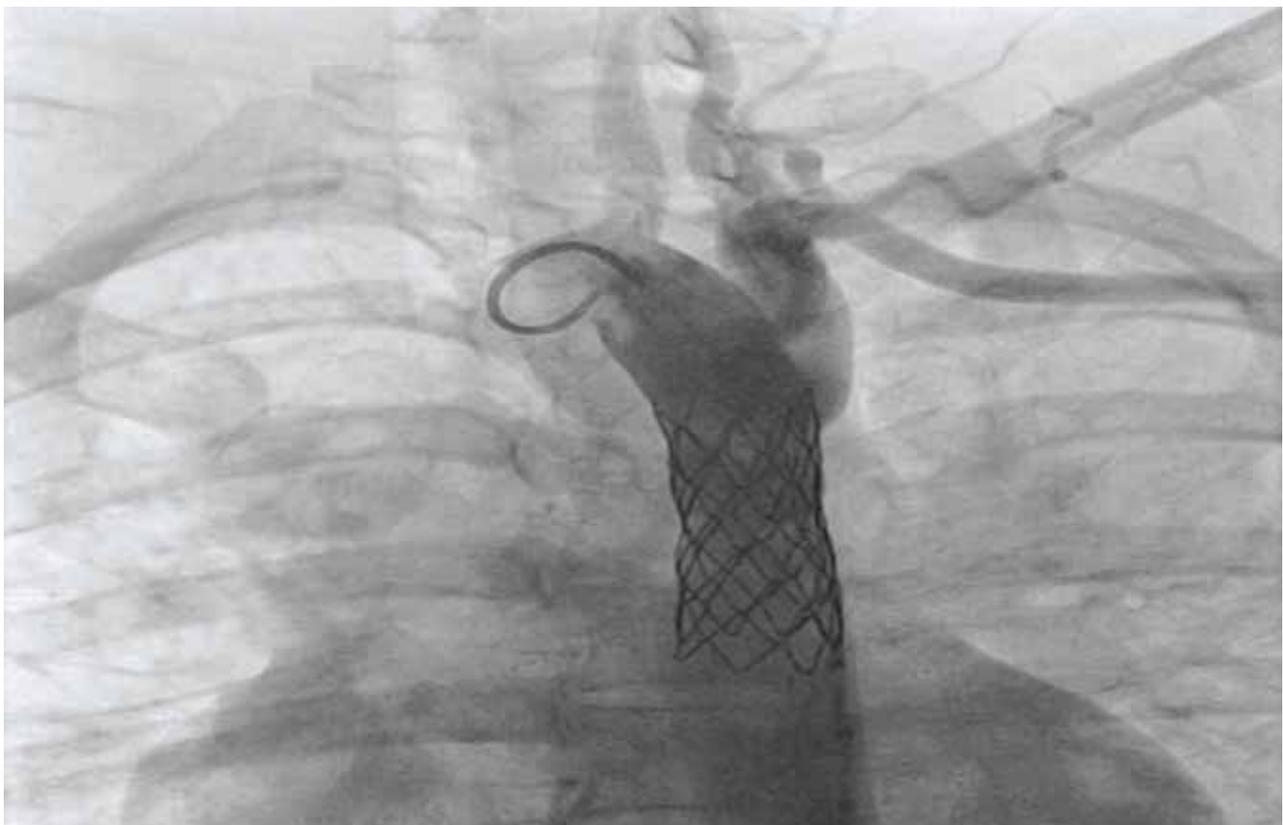
the blood flow to the right arm, and some parts of the head, leading to the headaches and the absence of pulse on her right hand." This made the case extremely rare and multiplied the challenges in treatment, recounts Dr. Banerjee and Singhi.

Explaining the challenges and the risk involved, Dr. Anil Singhi Sr. Consultant Cardiologist said: "For proper stenting of CoA, we needed to cross the narrowed location from below, and deploy a balloon mounted stent across it" In Ms. A's case we decided to cross from above as crossing from below through a pin hole opening was difficult. Also, we temporarily paced Abia's heart during the procedure so that her cardiac output is reduced to make sure the stent doesn't slip." The long and detailed planning resulted in successful completion of the procedure on April 19, 2016. The result was clinically perfect. Ms. A's right hand pulse which was not palpable became normal and equal to the left and there remained no gradient across the CoA.

"The stenting of CoA is anyways a high end intervention and in cases where the anatomy is complex like that of Ms. A's, it is even more challenging. I am happy to say that it was the first such case treated at Medica and it has been a huge success," said Dr. Singhi with a beaming smile.

At the end of the day, when the procedure was over, Ms. A's said: "Look doctor, I can feel my pulse. I am very happy that my headache has gone."

The chirpy, bubbly young girl, full of ambition to attain great heights in her career, and so full of life has now gone back to a regular and healthy life, embarking on a new and fresh journey towards her future.



Fibromyalgia Syndrome: Evolving concepts



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Fibromyalgia (FM) is a medical condition characterised by chronic diffuse pain and exaggerated pain response to pressure. It has gradually progressed from being a condition of vague debilitating illness to a discrete pain syndrome over last two decades. It was widely recognized after the publication of the American College of Rheumatology classification criteria in 1990, which were later modified in 2010 (1). Its prevalence has been estimated to be approximately 2-7% (2). It is a complex disorder associated with chronic widespread pain, fatigue, cognitive impairment, poor sleep and mood disorders. Patients frequently report a host of other symptoms including headache, gastrointestinal symptoms, dizziness, numbness or tingling and low grade fever. These symptoms are waxing and waning in nature with periods of exacerbations or flares (3).

Etiology and Pathogenesis

The etiology and pathogenesis of FMS is not fully understood. However evidence suggests that several factors potentially underlie the disorder.

1. Central Nervous System (CNS). FMS is associated with increased pain sensitivity that suggests dysregulation at the central level. Central sensitization is the main mechanism involved in its pathogenesis. Impairment of descending inhibitory pain pathway helps to further exacerbate the central sensitization.
2. Autonomic Nervous System. Sympathetic nervous system is persistently hyperactive in fibromyalgia patients but hyporeactive to stress. This could explain some clinical symptoms such as fatigue, sleep disorders, anxiety, morning stiffness and bowel irritability.

3. Peripheral Nervous System (PNS). Various studies have shown reduced density of epidermal A and C fibres in these patients. This loss is most likely due to T cell mediated immune mechanism (4).
4. Genetic Factors. Genome – wide association studies (GWAS) detected one major locus on the chromosome 17p11.2-q11.2 and several minor loci. The estimated sibling recurrence in various studies suggests a strong genetic component (5).
5. Immune System. Fibromyalgia is common in patients affected by autoimmune diseases.
6. Psychiatric Aspects. Psychiatric problems are very frequently associated with FMS. The most common conditions associated are anxiety, somatization, panic disorders and depression.

ACR 2010 Diagnostic Criteria:

FMS is diagnosed if following 3 conditions are met:

1. Widespread pain index (WPI) of 7 or greater and Symptom severity (SS) score of 5 or greater; or WPI of 3-6 and SS score of 9 or greater.
2. Symptoms have been present at a similar level for at least 3 months.
3. The patient does not have any other disorder that explains pain (For eg. Hypothyroidism, Adrenal dysfunction, Rheumatoid arthritis, Ankylosing spondylitis, Chronic fatigue syndrome, Vitamin or Mineral deficiency, Psychiatric conditions etc.)

Widespread pain index (WPI) is calculated by counting total number of areas of pain and Symptom severity (SS) score is the sum of severity of fatigue,

waking unrefreshed, cognitive impairment and somatic symptoms.

Treatment

Because there is no cure for fibromyalgia, the goal of treatment is to improve symptoms and optimize function. There is strong evidence that multidisciplinary treatment is effective in treatment of FMS.

Pharmacotherapy

Three drugs have been approved by FDA for the treatment of FMS: pregabalin, duloxetine and milnacipran.

1. **Duloxetine and milnacipran:** These serotonin – noradrenaline reuptake inhibitors improve the symptoms because of their effect on descending inhibitory pathway. Milnacipran has increased selectivity for norepinephrine than for serotonin. It may be helpful in patients with significant fatigue or cognitive dysfunction. Duloxetine should be considered in patients with significant depression.
2. Pregabalin acts by reducing the release of various neurotransmitters such as substance P, norepinephrine and glutamate which are involved in enhanced pain transmission in such patients.
3. **TCA:** Amitriptyline has shown efficacy in various studies.
4. **Tramadol:** A weak μ - opioid receptor agonist and a reuptake inhibitor of serotonin and norepinephrine, is frequently used in FMS treatment.
5. **Cyclobenzaprine:** It is a muscle relaxant which is structurally similar to the TCAs. It has shown moderate reduction in symptoms of pain and sleep problems.
6. **NSAIDs:** Considering their side effects and peripheral action they are less likely to be beneficial in FMS patients.
7. **Desensitisation therapy:** IV infusion of lidocaine and ketamine provides substantial pain relief (6).
8. **Potential options:** Various other antidepressants, cannabinoids, dopamine agonists, low dose hydrocortisone and hypnotics are under trial for their efficacy in FMS.

Beyond Pharmacotherapy

1. **Exercise:** Physical deconditioning is common in FMS patients. Tailored aerobic exercise, along with strengthening and stretching elements is beneficial in reducing pain and depression and improving physical fitness.
2. **Cognitive behavioural therapy:** It was found to help patients cope with pain by improving pain related behaviours, self-efficacy and physical functioning. It has been suggested as an adjunct to pharmacotherapy.
3. Patient education regarding chronic and waxing/waning nature of FMS has shown to reduce symptom intensity.

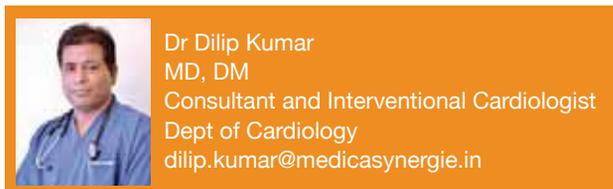
Conclusion

Fibromyalgia syndrome remains one of the most difficult pain conditions to treat. FMS patients experience long term illness with loss of quality of life. The ideal approach to such patient would be a multidisciplinary patient specific treatment which includes both drugs and nonpharmacological treatment such as exercise, cognitive- behavioural therapy and patient education.

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Post CABG patient with recurrent drug refractory VT



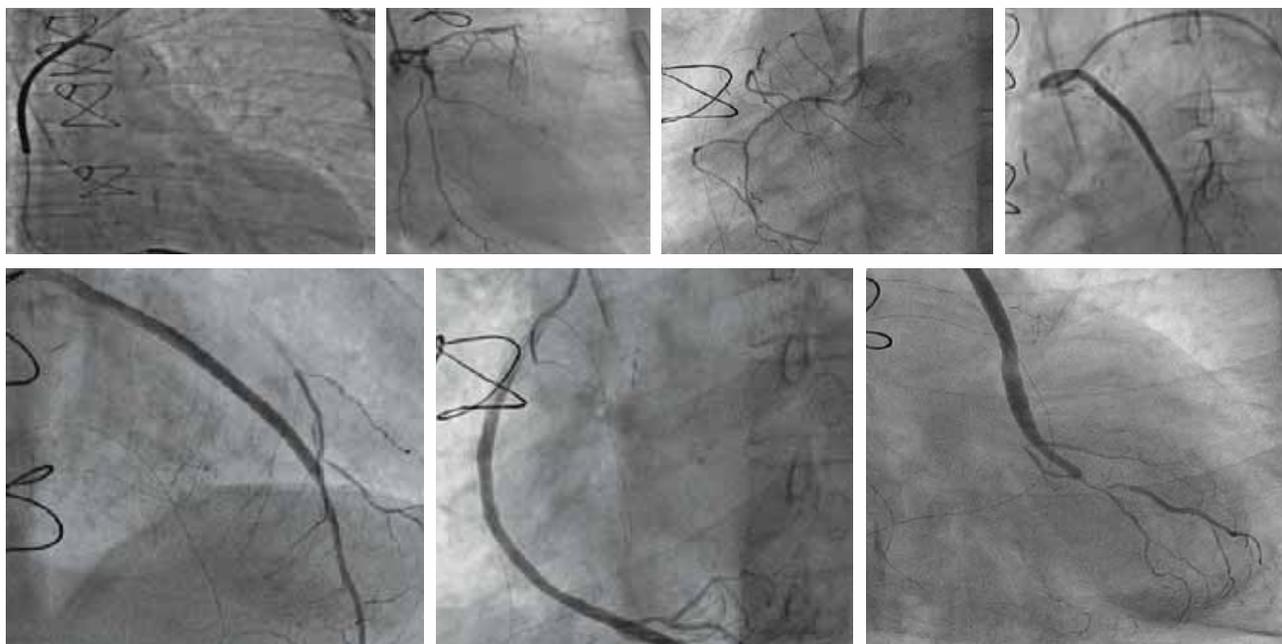
Medica Superspecialty Hospital, Kolkata

62 Year old gentleman a known case of type 2 diabetes mellitus. had coronary by pass done on 05/05/2016 (Saphenous Venous Graft – Left Anterior Descending, Pedicle Left Interior Mammory Artery + Saphenous Venous Graft – Diagonal 1, Saphenous Venous Graft – Obtuse Mariginal and Saphenous Venous Graft – Posterior Descending Artery) His ejection fraction was 40%. He was admitted on 22/07/2016 with episode of ventricular tachycardia which was refractory to Amiodarone and B Blockers. He needed DC Shock for cardioversion. The episodes of ventricular tachycardia were frequent (2-3 episodes per day each required electrical cardioversion). There was concern of AICD exhaustion once implanted with addition to damage of repeated shock. The possibility of 3-D ablation of VT substrate was also considered. With this background patient was taken to Cath Lab for coronary angiogram and to evaluate the effectiveness of overdrive suppression of VT through

temporary pacing. The grafts were patent and VT was easily suppressible with overdrive pacing from TPI lead

Next morning the AICD was implanted and VT was controlled by ATP (Antitachycardiac Pacing). After 1 month patient came for follow up and was doing well with no episodes of VT receiving shock.

Summary: Treatment of VT in post MI substrate is always a challenge. Ischemia guided revascularization followed by AICD (if VT is persistent after revascularization) is the treatment of choice. Many of these patients have poor quality of life due to shocks from AICD. Inadvertent shocks can be minimized by proper programming of the device. Besides reducing unnecessary shocks algorithms like ATP can convert many VTs to sinus. 3-D ablation of VT is the last resort in patient requiring multiple / frequent shocks





MASTERS IN EMERGENCY MEDICINE - MSH KOLKATA

With the commitment to bring the best in healthcare to Kolkata, Medica aims to build a full-fledged Emergency and Trauma Care Center in the city as well as in all our other institutions. Trained emergency physicians will be available to manage the ER round the clock, capable of handling any medical or surgical emergency.

To create an advanced and efficient emergency response unit, we will be investing into well equipped ambulances manned by trained EMTs and doctors. Efficient transportation of critical patients, both in terms of method of transportation as well as medical care during transportation, by road and by air will be an area of focus.

we want to ensure that all the three aspects of care: Pre-hospitalisation, hospitalisation and post hospitalisation are covered with the best the world has to offer. Domiciliary care will also include emergency medical response at the patients' home. This is a new concept in India, and we hope to initiate this aspect of medical care soon.

To enable us to achieve this aim, we are introducing a 3-year Masters in Emergency Management programme with George Washington University, USA. Students will be trained by Medica doctors familiar with local conditions as well as clinical staff from GWU guiding on the latest in Emergency care.

If you are interested in becoming a skilled Emergency Care Consultant, do make use of this opportunity, and be part of the medical team that makes an impact in healthcare delivery in Eastern India.

For further any information contact sudeshna.barua@medicasynergie.in and soumya.dingal@medicasynergie.in

SPOT THE DIAGNOSIS



A male patient came with the following (In Image) symptoms. On examination doctor diagnosed it as sausage digit sign

This condition is seen in which type of arthritis?

- Rheumatoid arthritis
- Juvenile Idiopathic Arthritis
- Enteropathic Arthritis
- Psoriatic Arthritis.

Contributed by Department of Clinical Pharmacology

Rules

- Doctors registered with MCI or any State Medical Council can participate.
- Please email your answer to editor. attribute@medicasynergie.in
- First correct entry from each Medica unit will win a Rs. 1500/- gift voucher.
- Last date for entries is 1st November 2016
- Attribute Editorial Team and doctors from the dept contributing the case for "Spot the Diagnosis" are not eligible to participate.
- Decision of the Attribute Editorial Team is final and binding.

Winner of the Attribute 26th Issue Quiz



Dr. Shruti Bhandari
BMMSH Ranchi

Answer to Spot the Diagnosis Attribute 26th Issue
Lym's Disease

International Nurses Day in Medica Super specialty Hospital

International Nurses day is celebrated in Medica on every 12th May. 2016 -12th May is 197th birth anniversary of “The Lady with the lamp “Florence Nightingale. The theme of 2016 for this auspicious day is “Nurses: A force for change, improving health system’s resilience.

Medican Nursing team started this celebration through number of learning and talent hunting sessions from 2nd May and the celebration end with an excellent colorful cultural program on 12th May.

Our aim of this celebration is to develop a resilient nursing workforce for Medica super specialty hospital.

On 2nd May - Program started with spot correction on Medicine administration and a group discussion was held on challenges faced by Nurses in administration of medications. The group was lead by Dr. D.K.Pahari, Dr.Sudip Roy and Mam. Sati Chakroborti. Other eminent speakers in this group are clinical Pharmacologist Dr.Arpan Dutta Roy and nutritionist Ms. Sanghamitra Chakroborty.



On 3rd May - World Asthma day

A session taken by Consultant of respiratory medicine Dr. Nandini Biswas Poster competition taken place and work station arranged for giving awareness on respiratory devices utilization. Inter hospital competition on changing Nursing care by using various Technologies on Pressure Ulcer Management.



On 4th May – Medical exhibition and information on safe infusion system for prevention of HAI (Hospital Acquired Infection), assure patient’s safety, health care professional’s safety, environmental safety and technological achievement in drug delivery system.



On 5th May – World Hand hygiene day

Road show, random audit conducted and found maximum compliance by all departments. Awareness given to patient’s visitors on hand hygiene. Poster competition held on World hand hygiene day.



On 6th May – A lecture on Diabetes, diabetic wound formation and management given by endocrinologist Dr. Sumit Mukherjee “Quiz on wound wisdom is conducted”.



On 9th May - Model presentation on IND (International nurses day) theme of 2016

Nurses: A force for change Improving Health system's Resilience

Opening of the presentation done by our honorable Chairman Dr. Alok Roy

A motivating speech given by our senior consultant oncologist Dr. Chanchal Goswami on resilience, advantage of proper documentation and danger of improper or not keeping records of services delivered



On 11th May – Quiz on general knowledge at morning session from 9am to 10.30am

11 am – 7pm is fun time:-

Selection of Miss & Mr. Medican, Miss. Photogenic & Mr. Photogenic and Miss. & Mr. Personality from MICC TEAM.



On 12th May – A session conducted on Chemo – port Care at morning from 10.30am – 11.30 am
 5pm – 7pm – Lamp lighting ceremony started through lighting the lamp by chief guest ex-Registrar Mrs. Sumita Datta followed by gorgeous cultural program



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Two stalwarts of medical science, sharing a common vision of extending the latest in healthcare to the people in India, at the most affordable costs, create a landmark opportunity to fulfill their dream. **OHIO HOSPITAL** along with strategic partner **MEDICA**, is now ready to serve and save the lives of many more!

Renal Transplant, BMMSH

The first case of kidney transplantation was carried out at Bhagwan Mahavir Medica Superspecialty Hospital, Ranchi on 21.6.16. The recipient and donor were emotionally related (husband and wife). They were ABO compatible. On initial pre-transplant evaluation, DSA (Donor specific antibody) titre of the recipient was found to be very high, hence he was started on triple immunosuppressive drugs (Tacrolimus, Mycophenolate Mofetil and Prednisolone), after 4 weeks of which the titres came down and transplant was planned. Per-operative and post-operative periods were uneventful; the recipient was discharged in a totally asymptomatic condition with good urine output and normal renal functions.

The procedure was a team work involving nephrologists, urologists, general surgeons, anaesthetists, radiologist, pathologist and microbiologist, as well as nursing staff. All supportive departments extended full cooperation at every step of the transplant procedure.

On 15th July, 2016, BMMSH organized a press conference to announce the successful outcome of the first renal transplant case, wherein both the recipient &



the donor were present in front of a large gathering comprising media representatives, entire transplant team of doctors, other consultants and Medicans. Dr. Baidya stressed upon the media's role to raise awareness towards organ donation which translate into subsequent cadaveric transplants. The recipient, present in good health, spoke in front of the media thanking his wife for this priceless gift of life, and also acknowledged the Medica team of doctors and other staff for making this transplant smooth, comfortable and successful.



BMMSH Renal Transplant Team: (L to R) Surgeon Dr. (Maj) Ramesh Das, Anaesthetist Dr. Sanjay K. Verma, Urologist Dr. Saumik Chatterjee, Director of Urology MSHK Dr. PK Mishra, Director of Nephro Sc. BMMSH Dr. AK Baidya, Nephrologist Dr. Pragya Ghosh Pant, Anaesthetist Dr. Asif Nadeem Khan



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