NOVEMBER 2022

HealthNews DIGEST

Aster HOSPITALS & CLINICS

We'll Treat You Well

Dr. Sherbaz Bichu

CEO & Specialist Anaesthetist
Aster Hospitals & Clinics

On behalf of Aster's leadership, I welcome you to the 3rd edition of the HealthNews Digest. The enthusiasm around this initiative and the contributions from our doctor fraternities have only grown since the launch. I would like to congratulate all our doctors at Aster Hospitals and Clinics, who continue to not only deliver the best possible patient care but also helm this knowledge and experience-sharing initiative going beyond their call of duty.

As an organization, our mission is to provide affordable, accessible, and quality care to everyone. The eclectic mix of cases showcased in this series reinstates the fact that this mission can only be achieved if our medical practitioners work hand in hand with their peers across specialities. Let's keep up the energy and together we will trek through this exciting collaboration and learning journey via HealthNews Digest.

Dr. Ramanathan V

Medical Director
Aster Hospitals & Clinics, UAE

As the Medical Director for Aster Hospitals and Clinics, it gives me immense joy to witness this initiative built on the core idea of shared clinical best practices continuing to touch newer avenues with each successive edition. The support and involvement from both our doctor fraternities and allied professionals have been remarkable.

The heterogeneous nature of HealthNews Digest highlights strive for clinical excellence among our doctors and provides us an excellent medium for the conjunction of clinical knowledge from across specialties. I have no doubt that this initiative will be revered for years to come and will help up explore uncharted territories in the field of medical science.

Dr. Jerry Jimmy Chiramel
Specialist Orthopaedic Surgeon

Dr. Sumedh Krishna Waghmare
Specialist Radiologist

Lytic Lesion of Proximal Humerus

Early Diagnosis of Malignant Lesion of Proximal End of Humerus detected at Aster Clinic, King Faisal, Sharjah

PRESENTATION

- 32 year old female came to Orthopaedic OPD
- History of Pain in right shoulder
- No swelling/abnormal mass or growth
- No Trauma, Spontaneous onset pain
- 6 day duration pain

FINDINGS

During Examination:

- Near normal range of movements
- Terminally painful movement with associated spasm on abduction beyond 90 degrees

INVESTIGATION

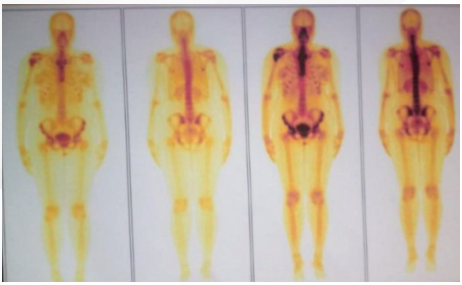
- Plain radiograph was almost normal
- High index suspicion of lytic lesion in the upper end of humerus
- Endosteal scalloping was seen on outer cortex area at cortico-cancellous junction.
- MRI was ordered on the same day that shockingly showed well defined, well marginated lobulated soft tissue lesion involving metadiaphysis of right humerus measuring 33x30x50 mm with endosteal scalloping with central calcification with features suggestive of low grade Chondrosarcoma.

Plain Radiograph of right shoulder with suspected lesion in upper end of Humerus

MRI image showing features suggestive of well-defined Low Grade Chondrosarcoma

MANAGEMENT

Patient was immediately referred to Oncology Centre where biopsy and staging was done that showed Grade 2 Chondrosarcoma.
Technetium-99m (99mTc) Bone Skeletal Scintigraphy Scan of the whole body was taken that showed no evidence of metastasis. Surgical excision of upper end of humerus was performed along with limb salvage and humeral head reconstruction procedures.
Timely diagnosis, referral and intervention helped in preventing Chondrosarcoma progressing to next stage. Higher grade Chondrosarcomas are known for metastasis. Regular monitoring is required to see for local recurrence, distant and lung metastasis.



Skeletal Scintigraphy images showing more activity at right proximal Humerus; no evidence of distant metastasis

Post operative X-ray image showing an excision followed by limb salvage procedure

DISCUSSION

Chondrosarcoma is a malignant cartilaginous tumor identified by its characteristic histological composition based on hyaline cartilage. It is the third most common primary malignant bone tumor overall, and the second most common primary malignant bone neoplasm of adults, after myeloma. Most of the chondrosarcoma cases are sporadic but they can also occur because of malignant transformation of benign tumors like enchondromas or osteochondromas. This malignant transformation ensues on solitary, benign lesions or, with a much higher incidence, on one of the multiple lesions found in patients with Maffucci syndrome or Ollier's disease, the axial skeleton is frequently affected (sternum, pelvis, scapula, or ribs) followed by the proximal femur and humerus.

The epidemiological characteristics of chondrosarcoma are the slight male predominance and the highest prevalence in patients older than 50 years of age. Pathogenesis of chondrosarcoma is not clearly understood with higher focus on the importance of genetic factors like chromosomal structural abnormalities and transcription factors in the development of this pathology. A particularly important feature is the histological grading system of chondrosarcoma, which has essential prognostic significance and guides the treatment strategy. Grade I tumors are characterized by a histological appearance resembling enchondroma, with uniform, hyperchromatic nuclei, and moderate cellularity. These are considered low-grade lesions. Grade II tumors have a higher level of nuclear atypia and a more aggressive behavior. Grade III lesions possess greater nuclear and cellular pleomorphism, with frequent mitoses and poorer differentiation. Plain radiography is the preferred imaging technique for initial diagnosis. It usually reveals lytic bone lesions with a high incidence of

intralesional calcifications
(the so-called 'popcorn pattern") but also permeating lesions, specific for the aggressive forms which can lead to pathological fracture. A comprehensive evaluation of the primary tumor and possible secondary bone lesions is accomplished using computed tomography (CT), which can reveal heterogeneous intensification, cortical disruption and matrix calcification complemented with magnetic resonance imaging (MRI) and scintigraphy. The management is governed by surgery with wide. Excision for intermediate and high-grade lesions, axial skeleton tumors, with soft tissue or joint involvement. Central, low-grade tumors can be excised by Curettage and adjuvant, local therapy. Chemotherapy has limited use and only for high-grade tumors like the dedifferentiated type of radiation therapy can be used for unresectable lesions or as adjuvant therapy after surgery for local control of Recurrence. The most important prognostic factor for Chondrosarcoma is the histological grade. The five-year survival rate ranges from 83% for patients with grade I Lesions to less than 60% for grade II or III chondrosarcoma, and to even lower numbers for the dedifferentiated type.

CONCLUSION

The contemporary management of chondrosarcoma is founded on oncological surgical excision due to its resistance to radiation and chemotherapy. Proximal humerus chondrosarcomas have a slightly better prognosis compared to other disease localizations but with added challenges for surgical management. The actual treatment strategy involves limb saving procedures, with complex reconstruction techniques employed after oncological resection, which carries the risk for specific complications. Improvement of reconstruction techniques and overall chondrosarcoma management is required, with the final goal of better oncological and functional results.

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Complete Rectal Prolapse

Complete Rectal Prolapse treated successfully at Aster Hospital, Al Qusais

Dr. Sudheer Salavudeen
Specialist General &Laparoscopic Surgeon

PRESENTATION

- 27 year old male
- No medical history
- No family history of medical illness

Admitted with:

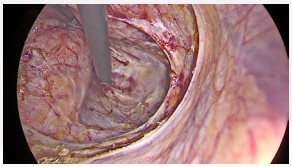
- Complaints of severe pain, bleeding and swelling per rectum

FINDINGS

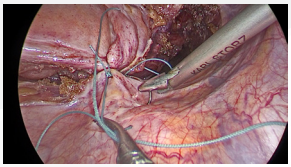
- During Examination:
- Completely prolapsed rectal mucosa
- Swelling, bleeding and pain in rectum

DURING PROCEDURE

- Thiersch wiring procedure was performed to reduce edema and control acute events in the initial stage, and then the patient was electively taken up for Laparoscopic Suture Rectopexy.
- 10mm camera port was inserted through supraumbilical incision with two retracting ports on left side and two working ports on the right side.
- After incising the peritoneum below the sacral promontorium, keeping both the ureters under vision, the dissection was carried out through the Holy plane of Heald, and posterior dissection was extended till Intersphinctric plane.
- Digital examination per rectum confirmed the extend of dissection. Anterior dissection was then carried out by dividing the lateral ligaments on either side.
- After attaining adequate dissection, rectum was placed in tension 2 sutures with 0-2 ethibond on both the sides anchoring it to the sacral promontorium.
- There was minimal bleeding after the procedure. The area was washed, and the port site was closed



Dissection on the Holy Plane Heald



Anchoring of the Rectum to Sacral Promontory

POST PROCEDURE

The patient tolerated the procedure well, did not face difficulty and was discharged in 24 hours. He was stable in condition.

DISCUSSION

Complete prolapse of rectum is a distressing clinical entity, with symptoms such as mucus discharge, rectal bleeding, tenesmus, constipation and incontinence in addition to the prolapse itself. Many surgical procedures have been described for complete rectal prolapse, which may either be via perineal or transabdominal approach. With the evolution of Laparoscopic Colorectal Surgery, the benefits of Laparoscopic Rectopexy over Open Rectopexy are obvious, particularly when the results of both the procedures are comparable.

Both Laparoscopic Resection Rectopexy and Laparoscopic Suture Rectopexy without resection has their own merits. However, a Colonic Resection requires a Colonic Anastomosis and an Abdominal Incision to retrieve the specimen, making it technically demanding and time consuming. Laparoscopic Posterior Mesh Rectopexy without Resection has the problems of increased constipation after surgery in addition to increased cost of the mesh. On the other hand, Suture Rectopexy without Resection may be regarded as an ideal laparoscopic procedure as it can be performed intracorporeally completely and avoid the usage of a mesh, which can improve the functional results such as constipation.

Cardiothoracic Team at Aster Hospital, Al Qusais

Stanford Type-A Aortic Dissection

Stanford Type-A Aortic Dissection arising in the Proximal Aortic Arch with Upper Body Malperfusion treated by Total Arch and Ascending Aorta Replacement at Aster Hospital, Al Qusais, Dubai, UAE

PRESENTATION

A 40-year-old male with abdominal discomfort presented to Aster Hospital, Al Qusais, Dubai. An abdominal CT scan was done which showed the presence of an aortic dissection with a sizable false lumen and left leg malperfusion. This triggered a CT scan of his chest with contrast that revealed an aortic dissection in the thoracic aorta (Stanford type A) with an intimal tear in the concavity of the proximal arch (proximal to the left subclavian artery). The left subclavian artery was involved in the dissection process with reduced flow and upper body malperfusion. The left vertebral artery was seen to be thrombosed. The proximal ascending aorta was dilated at 3.8 cm, and the rest of the aorta was unfolded and dilated at 4cm at its maximum diameter.

Echocardiography was performed which showed a trileaflet aortic valve with good co-aptation, it excluded aortic regurgitation and a pericardial effusion. There was an intimal tear within the concavity of the aortic arch proximal to the left subclavian artery. The dissection flap entered the left subclavian artery and there was a sub-intimal haematoma within the vessel wall. The intimal dissection flap extended distally into the proximal descending artery.

There was no haematoma or effusion. The aortic tissue was incredibly friable, thinned out and the arch was in a state of imminent rupture at the time of surgery.

His cardiac function was noted to be good at that time, but his left radial pulse was absent, indicating upper body malperfusion, requiring emergency surgery. He was transferred to the operating theatre immediately and emergency repair of Acute Type A Aortic Dissection was done with a Classical Elephant Trunk Procedure and Distal Ascending Aorta Replacement with 24mm Uni-Graft W Woven Vascular Prosthesis (AG Aesculap).

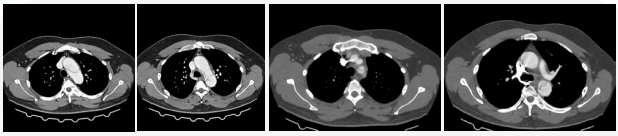


Image 1 Image 2 Image 3 Image 4

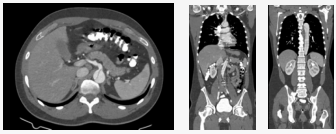


Image 5 Image 6 Image 7

Image 1: The origin of the entry tear of the aortic dissection in the proximal arch.
Image 2: The false lumen seen in the arch.
Image 3: The left subclavian artery is involved in the aortic dissection and the false lumen is seen resulting in compromised left upper body blood flow.
Image 4: The false lumen seen in the proximal descending aorta.
Image 5: The aortic dissection was clearly seen in the abdominal aorta (the superior mesenteric artery is perfused by the true lumen).
Image 6: The aortic dissection seen in the abdomen.
Image 7: The aortic dissection seen in the thorax.

THE SURGICAL OPERATION

1. The heart and aorta was accessed via median sternotomy.

2. Following systemic heparinisation, full cardiopulmonary bypass (CPB) was instituted centrally via two-stage right atrial cannulation and ascending aortic return by a 22 French straight EOPA (Extended One Piece Arterial) cannula and 2 stage right atrial venous cannula.

3. A LV vent was placed via the right superior pulmonary vein to decompress the heart. Upon commencement of CPB, core cooling to 24 oC was done and the heart was allowed to fibrillate at 32oC.

4. Upon reaching 24oC, the circulation was arrested, and the aortic arch was opened transversely and the aortic cannula was removed from the aorta. The distal ascending aorta was cross clamped and myocardial protection was provided by means of antegrade cold blood perfused directly into the aortic root via a DLP cannula.

5. Anterograde cerebral protection by cannulation of the brachiocephalic, left common carotid and subclavian arteries was done with retrograde cardioplegia cannulae and perfusion at a rate of 10 ml/kg body weight at 24 oC.

6. By this means, the head, neck, brain, and heart were continuously perfused and there was total cold circulatory arrest of the lower body during this phase of the operation.

7. The aortic arch was transected distal to the left subclavian artery. An island of aortic tissue was created containing the origin of the head and neck vessels.

8. The proximal descending aorta was sized to 24mm with an aortic valve sizer. A 24mm Uni-Graft W Woven Vascular Prosthesis AG Aesculap was selected.

9. This graft was inverted upon itself and placed into the proximal descending aorta. The double edge of the inverted graft was sewn onto the aorta with semi-continuous 4-O Prolene reinforced with Teflon felt.

10. The 12cm inverted portion of the graft was carefully brought back out into the operating field to create a synthetic neo-aortic arch.

11. A 5 cm incision was made longitudinally in the superior surface of the neo- aortic arch and the island of head and neck vessels was anastomosed with semi-continuous 4-0 Prolene. The suture lines were reinforced with the use of BioGlue, and Teflon felt.

12. The neo-arch was cannulated with a 22 Fr EPOA cannula and perfusion of the head, neck, upper body, and brain as well as the lower body was recommenced slowly at first.

13. A cross clamp was placed on the proximal part of the graft after de-airing. Rewarming was commenced. The distal ascending aorta was resected as well as it was of poor quality and the proximal anastomosis was done at the level of the proximal ascending aorta above the sino-tubular junction with continuous 4-0 Prolene.

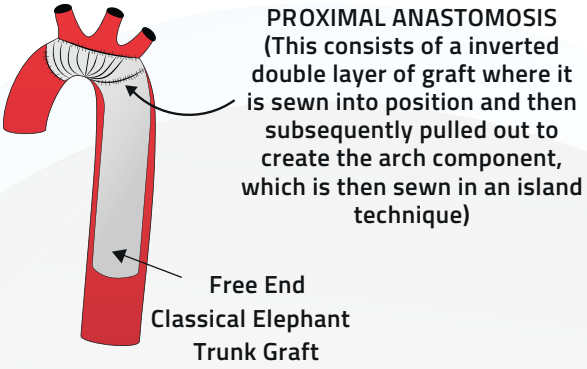
14. Extensive de-airing was done. As the patient rewarmed to 37oC, it was noted that the serum potassium was raised to 7.5 mMol/L-1. Hence, dextrose, insulin and haemofiltration were commenced.

15. Two right atrial and two right ventricular pacing wires were placed on the surface of the heart and the patient was AV sequentially paced at 100 min-1.

16. Adrenaline and noradrenaline were commenced. CPB was progressively weaned on 3 initial attempts, with cardiac function noted to be impaired. After an additional period of CPB, milrinone was commenced and the heart took over the function of the circulation well and the patient was separated from bypass.

17. Transoesophageal echocardiography was performed, which showed that the heart was successfully de-aired and there was no evidence of aortic regurgitation under loading conditions. The aortic valve was seen clearly, and all three leaflets were moving well.

ELEPHANT TRUNK TECHNIQUE



POST PROCEDURE

The patient was transferred to the intensive care unit in a stable condition. Sedation was lightened and the patient was fully responsive and neurologically intact on arrival to ICU.

Post op CT shows an excellent result; the false lumen has been obliterated by the classical elephant trunk graft.

DISCUSSION

Acute type A aortic dissection is a life-threatening condition. It is challenge to diagnose and treat as it is associated with high morbidity and mortality.

This patient had a dissection which started in the proximal aortic arch and resulted in malperfusion of the upper body. He was significantly hypertensive. Patients with acute type A aortic dissection who have yet to have surgical repair have an associated mortality rate of 1-2% per hour immediately after the onset of symptoms. Thus, timely diagnosis and surgery as soon as possible is essential for successful management.

It is very important to have a strong clinical suspicion of the condition and to arrange urgent CT scanning to assess the aorta I the chest and detect the presence of an aortic dissection.

High quality echocardiography is necessary to assess the aortic valve immediately which can also be involved in the dissection process and be regurgitant as acute aortic valve insufficiency is poorly tolerated by patients.

Urgent life-saving surgery is mandatory for these patients as the mortality over the first 24 hours without surgery is in excess of 50%.

Even after successful diagnosis and immediate surgery, the overall mortality in reported series after surgery is between 20-27%.

What distinguishes this case is that a full arch replacement was done together with the ascending aorta in the setting of an acute aortic dissection. To do such an operation requires extensive team working and a coordinated approach to manage the circulation.

The heart-lung machine was used to cool the patient to 24°C. The upper body, brain as well as the heart were kept perfused by catheters placed into the brachiocephalic, left common carotid and left subclavian arteries and perfused continuously with cold oxygenated blood.

The lower body was drained of blood and the circulation was arrested at 24°C. This case shows that with careful planning, selective catheterisation, organ perfusion, and good myocardial management, complex extensive reconstructions of the thoracic aorta are possible.

Such cases are rarely done in UAE. This patient had a very good recovery result after his operation. The preference is to use a composite stent graft for such patients with acute type A aortic dissection involving the arch. This is called a frozen elephant trunk procedure, but unfortunately such a prosthesis was not available, so the previous generation of this operation, the classical elephant trunk procedure was done instead.

Stroke, brain injury, acute limb ischemia, kidney failure, impaired blood supply to the gastrointestinal tract, bleeding and heart failure are common complications associated with complex emergency aortic surgery. Due to great teamwork, this patient was treated successfully by emergency surgery without experiencing any of these common complications.

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Removal of Sharp Intraocular Foreign Body (IOFB)

Successful Removal of Sharp Intraocular Foreign Body (IOFB) at Aster Hospital, Al Qusais

Dr. Boopathy Murugavel
Ophthalmology (Specialist)

PRESENTATION

- 37 year old male
- No medical history
- No family history of medical illness
- Complete loss of vision following trauma with a metal object
- Patient denied any ocular penetration

FINDINGS

During Examination:

- Right eye vision - 6/6
- Left eye - counting fingers close to face
- Retinoscopy showed clear glow right eye and no glow in left eye
- Intraocular pressure: Right eye 12 mmHg; Left eye 8 mmHg
- Free ocular movements
- Fundus examination of left eye showed dense Vitreous Hemorrhage obscuring the view of retina
- X-ray and B-scan showed the presence of Intraocular Foreign Body
- Patient was advised to undergo surgery immediately to prevent further complications due to retained IOFB

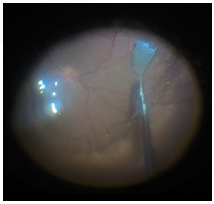
X-Ray images showing presence of IOFB in the left eye

DURING PROCEDURE

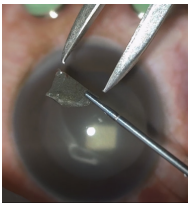
The patient was taken for Pars Plana Vitrectomy (PPV) procedure for foreign body removal:

- Eye drops applied 5 minutes prior to surgery.

- Peribulbar anesthesia was given, and lids and periorbital area were cleaned.
- Eye drape was applied taking sterile precautions and lids were held open with speculum.
- Three ports were established, and Pars Plana Core Vitrectomy started and dense vitreous hemorrhage obscuring view of retina and IOFB cleared.
- Sharp, triangular shaped IOFB of size 4x3 mm was seen floating in peripheral vitreous.
- PFCL was injected partially to protect optic nerve and macula.
- Vitreous was trimmed around the foreign body and removed through enlarged scleral port.
- PFCL removed and enlarged scleral wound was sutured.
- Trocars were removed and wounds cauterized.
- Antibiotics drops were applied before removing speculum.
- Eye patched and patient was advised to be shifted to ward.



Intraoperative IOFB



Removal of sharp IOFB from left eye

POST PROCEDURE

Patient tolerated the procedure well and was in a stable condition on discharge.
Patient was reviewed on day 1 and day 7 on which he had regained full vision to 6/6.

DISCUSSION

Retained IOFB can lead to infection and inflammation. Retained Iron Foreign Body in particular can lead to Siderosis bulbi. In siderosis bulbi, the iron pigments are dispersed and get deposited in almost all parts of the eye including cornea, trabecular mesh work, lens, ciliary body, and retina leading to various conditions such as glaucoma, cataract, and eventually irreversible total loss of vision due to progressive degeneration of retina.

Hence, it is imperative to remove the foreign body as soon as possible. Removal is often challenging as the foreign body is much heavier than the retinal tissue, and hence any slip while attempting to remove can cause inadvertent damage to retina if the foreign body falls on the macula, which can cause a full thickness tear of the retina.

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Also, the IOFB is usually retrieved through a larger, new incision, which renders the eye hypotonous, making the surgery even more difficult.

To summarize, Siderosis Bulbi secondary to a retained IOFB can be a devastating condition leading to short and long term complications resulting in irreversible loss of vision and has to be removed as soon as possible.

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Uni-compartmental Osteoarthritis of knee

CoUni-compartmental Osteoarthritis of knee treated with Open Wedge High Tibial Osteotomy (owHTO) successfully at Aster Hospital, Mankhool

Dr. Ranjith Narayan
Specialist Orthopedics

PRESENTATION

- 35 year old male
- No medical history
- No family history of medical illness
- Patient underwent Micro-facture Chondroplasty one year back from another center with no relief of pain

Admitted with:

- Complaints of progressive pain in left knee (VAS 8/10)
- Pain while standing and walking
- Disabling pain affecting daily life chores
- Bilateral genu varum

FINDINGS

During Examination:

- Observation of antalgic gait
- Varus deformity present, not corrected passively
- Medial joint line tenderness
- Range of Motion full stable
- Weight Bearing Orthoroentgenogram showed bilateral genu varum of 12 degrees

Initial MRI Scan

DURING PROCEDURE

- Patient underwent owHTO Procedure under Spinal Anesthesia
- Prepped and draped after radiopaque markers centering the hip, knee and ankle were placed.
- Sub periosteal elevation of superficial MCL was done after L-shaped incision of 7 cm over the medial proximal tibia and retraction of pes anserine.
- Two guidewires were passed from medial tibia aiming to fibular head superior aspect and osteotomy was done in same plane inferior to the K wires.
- Anterior and vertical osteotomy for tibial tuberosity was done retaining the distal part to the shaft.
- Osteotomes were passed serially and open wedge was done gradually hinging on lateral cortex.
- On alignment after opening, 12 mm base of wedge was found ideal for axis correction under fluoroscopy and PEEKPower plate was fixed with three screws proximally and three screws distally after placement of 12 mm bone substitute wedge posteriorly and 10 mm anteriorly.
- The pes tendon was repaired underneath the plate and the skin was closed after subcutaneous sutures with staples.

POST PROCEDURE

The patient tolerated the procedure well.

He was stable in condition with pain on and off, VAS 5/10, at the time of discharge.

He was advised toe-touch weight bearing and range of movement with knee strengthening exercises immediate post-operative period until 3 weeks after which weight bearing to tolerance limit was initiated.

The patient was full weight bearing without support by 4th week with VAS score on normal activities of daily living at 0/10 and on sporting activities with VAS score of 3/10 (Football) on recent follow–up.

Fig 1

Fig 2

Fig 1 & 2: Post-operative X-ray images.

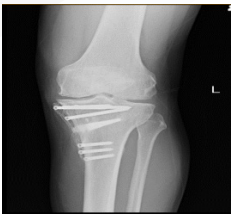

Fig 3

Fig 3: Widened medial joint space in comparison to pre-operative X-ray image after 7 months follow-up

DISCUSSION

High Tibial Osteotomy (HTO) is a surgical procedure to correct angular deformities of the knee to prevent development or progression of unicompartmental osteoarthritis. It is predominately done to correct Varus Deformities in young patients but can also be done to correct Valgus Deformities.

Arthroplasty would have failed for him due to excessive wear since he was a young and active patient with good vascular status hence HTO (High Tibial Osteotomy) was preferred. It is often performed in association with meniscal transplantation, cartilage repair procedures, and knee ligament reconstruction.

The aim of HTO is to realign the mechanical axis of the lower extremity to shift weight-bearing zones to non-affected areas. In this manner, damaged cartilage of the knee is off-loaded, thus decreasing pain, improving function, slowing knee deterioration, and potentially delay the need for arthroplasty.

In conclusion, High Tibial Osteotomy is a rewarding procedure for young adults with any progressive compartmental Osteoarthritis in isolation or in combination with other procedures as situation demands (Eg: Chondroplasty)

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- Neurology
- Obstetrics & Gynaecology
- Ophthalmology
- Orthopaedics
- Pathology
- Paediatrics & Neonatology
- Radiology

- 4 Operation theatres including a separate OT for women
- Suite rooms
- Private rooms & semi - private rooms
- Deluxe rooms
- 7 NICU beds
- 2 beds for labour, delivery and recovery
- A critical care unit comprising of 7 beds
- Day Care Unit with 9 beds
- 24 - Hour Emergency Care
- 24×7 Pharmacy

For appointments: +971 54 309 6105

OPD HOURS: MONDAY - SATURDAY, 9:00 AM - 10:00 PM

CARE IS JUST AN Aster AWAY

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