

A MISSED CASE OF SYNOVIAL HYPERTROPHY WITH MULTIPLE LOOSE BODY (SYNOVIAL CHONDROMATOSIS) DURING TOTAL KNEE REPLACEMENT SURGERY

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ABSTRACT

Synovial Chondromatosis is a condition in which cartiledginous osteocartiledginous bodies develop in the synovial membrane of Joints or their communicating bursae remesembling sago (snowstorm knee). These loose body tends to go for calcification by metaplasia and further cause enchondral ossification. It can be managed by Synovectomy and Removal of loose bodies with favourable outcome but in cases with the damage to the articular surface simply synovectomy might not be sufficient. Here We present a case of 62 Years Male with Bilateral Osteoartherites of Knee With Right more than Left. Xray showed Kellegren Lawrence type 4 with range of movement of 0 degree to 90 degree with no Fixed Flexion Deformity with failure of all the conservative management planned for Total Knee Replacement. Intraoperatively Loose body were appreciated and synovial hypertrophy was found, were removed and send for biopsy. Artheroplasmy was performed and paitent was discharged after removal of sutures. Patient was advised to review after 1 week 1 month and 3 month and outocme was assessed with knee society score.

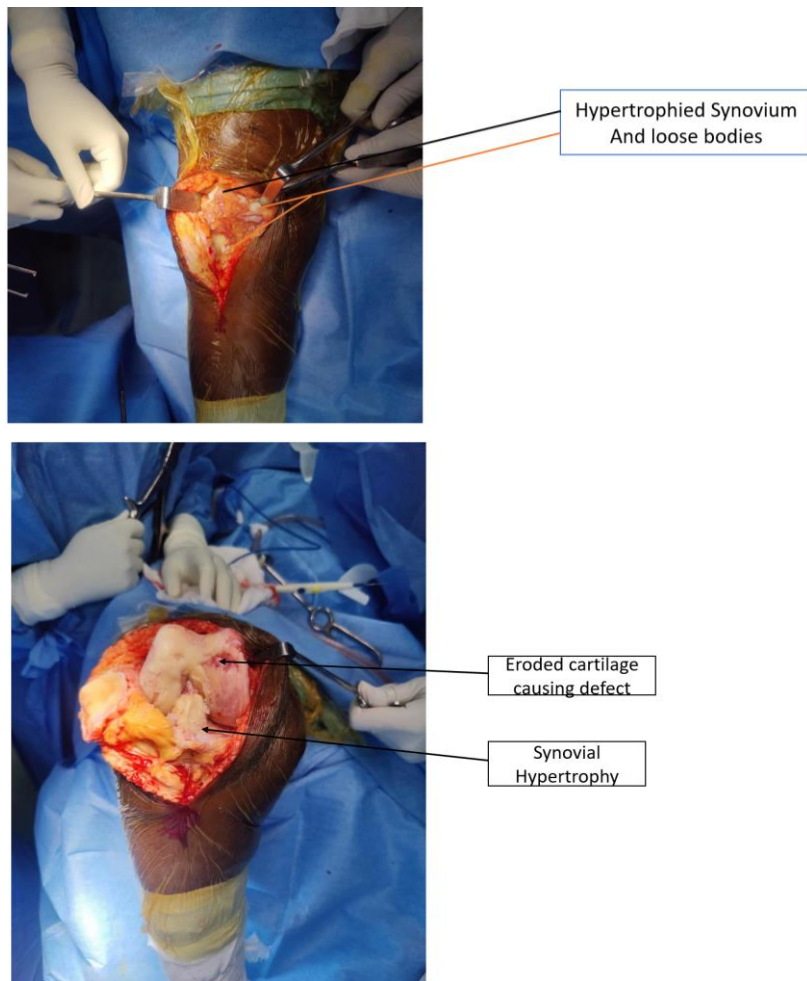
KEYWORDS: Cartiledginous osteocartiledginous, Kellegren Lawrence, Artheroplasmy.

CASE PRESENTATION

62 Year Male complaints of Pain over Both knee since last 10 years Right knee more than Left dull aching on and off aggravated since last 1 month which was associated with difficulty in climbing stairs, squatting down, sitting crosses legs and sitting of floor and relieved on rest and Medication. On examination there was no swelling scar sinus no redness no warmth Medial Joint line tenderness present, flexion upto 100 degree and was associated with crepitus. No ligament instability ray showed Severe Osteoartherities and patient was planned for Replacement surgery.



During the procedure we found Hypertrophied Synovium and multiple loose bodies, All the Loose bodies were removed and Hypertrophied synovium was debrided articular cartilage removed and Total Knee arthroplasty was performed.



Harvested loose bodies and Hypertrophied Synovium were sent for Histopathology



Loose bodies+ hypertrophied synovium

Loose bodies

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HISTOPATHOLOGY

Patient Id : 9010834	V.Tvce : IP	Sample Id : 2310100435
Name : Mr.MURUGESAN	IP No. : 1306919	Received on : 10-Oct-2023 13:58
Const. : Dr. HOD-ORTHOAEDICS -III -	Age / Sex : 62 Years Male	Reported on : 13-Oct-2023 15:10
Ward : MALE ORTHOPAEDICS		

Address: NO.172,SOUTH STREET,RENGASAMUDIRAM,,MALLUR 9629481740 Mob No:

Path No : H 1587/23
 Test : **Histopathological Examination**
 Clinical Data : Procedure: Total knee replacement- Right knee.
 Specimen : A- Synovial tissue.
 B- Loose bodies(osteophytes).
 Gross Pathology : Container A:
 Received multiple yellowish white soft tissue fragments largest-8x7x2cm, smallest-4x3x0.5cm. C/S of all fragments - yellowish.
 Container B:
 Received (3) bony fragments largest-1.5x1x0.5cm, smallest-0.5x0.5cm.
 BITS:
 A1- Bit from largest fragment.
 A2- Bit from second largest fragment.
 A3- Bit from smallest fragment.
 B- Largest fragment from container B.
 Tissue left.
 No of Blocks : 4
 Microscopy : A- Sections show hyperplastic synovial villi with underlying fibrofatty stromal tissue infiltrated by chronic inflammatory cells. Few muscle bundles are also seen.
 B- Sections show osteo cartilagenous tissue with dystrophic calcification.
 Impression : **CHRONIC SYNOVITIS.**
 Remarks / Comments : -

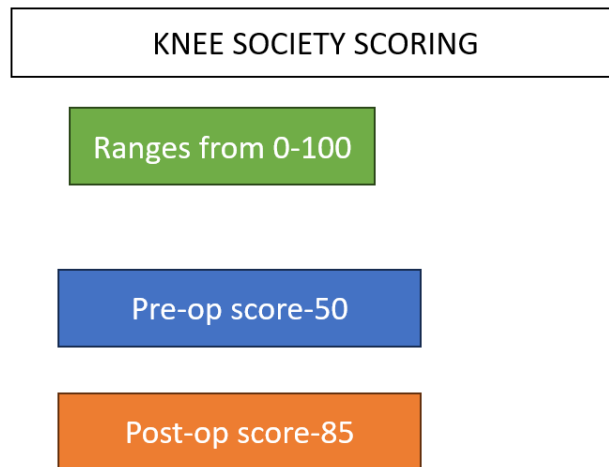
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Anesthesiology | Cardiology | Critical Care | Dermatology | Gastro Enterology | General Medicine | General Surgery | Nephrology | Neurology | Neurosurgery | Oncology | Ophthalmology | Orthopedics | Radiology | Urology | Master Health Check-up | 24 hours Trauma Care

Report obtained under the Impression of Chronic Synovitis

Knee Range Of Motion exercise advised with weight bearing as tolerated Patient was discharged after Suture Removal with knee society scoring - 85



DISCUSSION

Synovial Chondromatosis is Monoarticular synovial proliferative disease characterized by metaplastic proliferation of cartilaginous nodules in the synovial membrane of joints, bursae and tendon sheaths.

The proliferated nodules detach and move freely in the joint which may calcify or ossify.

According to Milgram classification

Stage 1 is active lesion of the synovium without free bodies and metaplasia of the synovium.

Stage 2 is transitional lesions with active intra synovial proliferation along the free loose bodies and it may remain within proliferated membrane.

Stage 3 is Multiple loose bodies in joint space and synovitis.

It is characterised by slow progressive loss of movement associated with stiffness.

Can be associated with Warmth erythema Tenderness Decrease in ROM (progressive).

Investigation can be done with Radiogram in standard AP Lateral view in which we can appreciate multiple loose bodies with calcification. In MRI we can observe initial cartilage nodules and in later stage calcification ossification can be appreciated.

Treatment can be Conservative or the Operative based on the severity of the Symptoms. Resection with synovectomy operated Arthroscopically or open. In case of Severe Osteoarthritis it can be followed up with Total knee Replacement surgery.

CONCLUSION

A 62-year-old male with severe bilateral knee osteoarthritis, particularly in the right knee, experienced pain and difficulty with activities like climbing stairs and squatting. After conservative treatments failed, he underwent total knee replacement surgery. During the procedure, multiple loose bodies and hypertrophied synovium were discovered

and removed and found to be Synovial Chondromatosis. Post-surgery, the patient followed knee range-of-motion exercises and weight-bearing as tolerated, achieving a Knee Society Score of 85. Synovial Chondromatosis, a disease characterized by cartilaginous nodules in the synovial membrane, was implicated, requiring surgical intervention in this severe case.