A case of loose body elbow

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INTRODUCTION

Loose bodies in joint occur as a result of degenerative process or synovial chondromatosis. It occurs mostly in large joints. Loose body in elbow joint is a comparatively rare entity. Patient becomes symptomatic of pain either due to arthritic changes or mechanical block it offers to the free joint motion. Presence of loose body can itself cause cartilage damage due to its mechanical effects.

Removal of the loose body relieves the patient from symptoms. The procedure can be done either by arthroscopy or by open surgery. Arthroscopic surgery also enables us to visualise the joint, debride it if needed and obtain biopsy sample for definite diagnosis.

Arthroscopy of elbow is a challenging task with a greater potential for neurovascular complications. Here we present a case of loose body elbow, treated by arthroscopic loose body removal.

CASE REPORT

A 41 year old male presented to us with history of right elbow pain of 2 months duration. The pain was insidious in onset and non progressive. There was mild pain only on elbow movements, when he felt the pain as from within the joint. There was no rest pain, night pain or radiation. He did not have fever, swelling or skin discoloration. No other joint was involved.

On clinical examination, his range of motion at right elbow was from 10°- 120° when compared to 0° - 140° on the left side. He had no neurovascular deficits. (Figure 1)

An X-ray showed a large well defined loose body in the olecranon fossa (Figure 2) and osteophytes along coronoid process, posterior aspect of olecranon and distal humerus.

For further evaluation, MRI was done, which suggested the possibility of Pigmented Villonodular synovitis (PVNS) or Synovial osteochondromatosis. (Figure 3)

An arthroscopic loose body removal and synovial biopsy was done. (Figures 4-8) The osteophytes over coronoid process and olecranon were contoured using a burr and the joint thoroughly debrided.
Figure 1a, b. Pre operative clinical photographs showing the fixed flexion deformity at the elbow.

Figure 2a, b. Pre operative X-rays AP and Lateral views of the elbow showing the loose body

Figure 3a, b, c. Pre operative MRI, sagittal, coronal and axial views
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Figure 4. Intra operative photograph showing radiocapitellar joint

Figure 5. Intra operative photograph: Biopsy of the synovium

Figure 6a, b. Intra operative photograph showing the loose body in the olecranon fossa and the same being removed

Figure 7. Intra operative photograph: Joint being debrided

Figure 8. Intra operative photograph: Bony prominences are being contoured using a burr
Post operatively, patient was advised active elbow movements as tolerated and discharged the next day. The biopsy report was inconclusive. Fragments of tissue lined by flattened synovial epithelium with focal papillary areas where stroma is oedematous and contains dilated vessels. Focal fibrocollagenous tissue and adipocytes also were noted. (Figure 9)

Post operatively, patient had dramatic improvement in the pain, though the range of movements was more or less the same. The patient was comfortable when he came for the two weeks post operative follow up and suture removal. ROM was painless throughout the entire range. After 1 year follow up, range of movements increased to near normal, comparable with the contralateral side.

**DISCUSSION**

Elbow arthroscopy is rarely done, as open approach is much easier and complications are less. An open approach adds to patient’s morbidities, prolonged hospital stay, cost and wound complications. Arthroscopic approach on the other hand is advantageous in view of these factors, but is more technically demanding and more prone for neurovascular complications. If found difficult at any point of time; surgeon should not hesitate to convert it into an open procedure.

Thorough anatomic knowledge and surgical expertise is needed for a successful therapeutic arthroscopic procedure in elbow. Advantages of arthroscopic procedure are a shorter hospital stay, lesser chance of infection, earlier return to normal activities.

Arthroscopic evaluation and treatment of elbow pathologies has gained popularity and has become more and more sophisticated with advanced surgical techniques. The
functional outcome and time required to return to normalcy have been found to be better and earlier in patients treated arthroscopically than by open procedures.

CONCLUSION

With this case report we intend to highlight the advantages of arthroscopic loose body removal when compared to open procedure. The patient was discharged the next day and could return to his job after 3 days, such that financial burden was lessened to the maximum extent possible. Post operative pain was much lower and the patient compliance was much better. The option of obtaining a biopsy sample, debridement and contouring the bony deformities also makes arthroscopic evaluation of the joint an attractive alternative to open procedure.

REFERENCES

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Quiz - 2

Identify the clinical condition shown in the photograph

For the correct answer turn to page 80