

RARE MILWAUKEE SHOULDER SYNDROME: A DIAGNOSTIC CHALLENGE

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INTRODUCTION

Milwaukee shoulder syndrome (MSS) is a rare destructive shoulder arthropathy associated with deposition of calcium hydroxyapatite crystals and typically affects the elderly patients aged 60-90 years. It is characterised by rapid cartilage and subchondral bone destructions with presence of osteochondral loose bodies. The mechanism of this disease is unclear, but the synovial fluid analysis will show a haemoserous feature and low cellularity (<1,000 leukocytes/mL)^[1].

CASE REPORT

A case of 66-year-old gentleman who had comorbidities of hypertension, diabetes mellitus and gout, presented with bilateral upper limb weakness and right shoulder pain for 3 years. He was initially admitted to medical ward for the diagnosis of CVA and subsequently was referred to us to rule out cervical spine pathology. Physical examination showed the right shoulder was a bit swollen as compared to the left side(Figure.1), with tenderness on palpation and reduced range of motion of the right shoulder.



Figure.1

Plain radiograph was done and it showed a destruction of the humeral head, narrowing of the joint space, subchondral sclerosis and presence of loose bodies(Figure.2).



Figure.2

This case became interesting as we needed to exclude any possibility of malignancy or other diseases that caused rapid destruction of the shoulder joint. Tumor markers and other blood investigations were taken. Blood results revealed all tumor markers were negative; WBC, 9.2[10³/μL]; ESR, 12mm/hr; CRP 5.1mg/dL; Calcium, 2.41mmol/L; Uric acid, 457μmol/L; ALP, 83U/L; AST, 46U/L. The synovial fluid aspiration was then performed on this patient, and the result showed a haemoserous feature with low leukocytes count and the other analysis was unremarkable. This case was then further discussed with Rheumatologist, and based on all clinical workups done, the patient was diagnosed with MSS.

CONCLUSION

Diagnosing this rare MSS is rather challenging. Despite the clinical history and radiographic changes, Alizarin red S staining of the synovial fluid can be done to confirm the diagnosis^[1] (which is not available in our hospital to be done on this patient).

REFERENCES

1. Jeong WS. Very Rapidly Progressive Shoulder Arthropathy with Complete Destruction of the Humeral Head. Journal of Rheumatic Diseases 2019; 26(2): 142-146.