Case Report

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Pigmented villonodular synovitis of hip treated by uncemented total hip arthroplasty: a case report

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ABSTRACT

Pigmented villonodular synovitis (PVNS) is rare, benign proliferative disorder of the synovium of unknown origin. It is commonly seen in knee joint but hip, ankle, shoulder, wrist & other joints can be involved. It is usually seen in young adults from 20-50 years of age. It is seen more in men than women. PVNS potentially locally aggressive disease that should be considered in younger patients who present with monoarticular joint symptoms and pathology. As per literature treatment of PSVN is total synuvectomy, specially for big joint can be replaced. Chance of recurrence is not rare. Radiation can help in recurrence case. We are presenting case of 34 years male patient with right hip pain and degenerative changes. After total hip replacement 3years follow up he has no complain still now.

Keywords: PVNS, Monoarticular degeneration, Total hip replacement

INTRODUCTION

Pigmented villonodular synovitis (PVNS) is rare, benign proliferative disorder of the synovium of unknown origin. It is commonly seen in knee joint but hip, ankle, shoulder, wrist & other joints can be involved. It is usually seen in young adults from 20-50 years of age. It is seen more in men than women.

CASE REPORT

On 2013 one 34-year-old male school teacher present with 2-year history of a dull aching pain followed by limping for last one year. Pain was radiating to right knee, increase after walking, decrease on rest, associated with wasting of thigh muscle. Not associated with any constitutional syndrome. The patient had been treated with empirical anti-tubercular drug for 6 months .Not getting any improvement he discontinues his treatment. Difficulty during squatting, cross leg sitting and having problem during using public transport. The patient was investigated using a multimodality radiological approach.

Radiograph showing extensive multiple erosions with well-defined sclerotic margins involving the right femoral head and acetabulum.

Right hip joint was shown on MRI; It was mostly T1 hypointense with areas of high and low T2 signal. Abnormal marrow signal intensity was present but the adjacent femoral cortex was intact. Extensive multiple erosions of the femoral head, neck, and acetabulum were seen.

Intra-operatively, a large hypervascular tumour with areas of necrosis was identified and excised. Histopathological examination later confirmed the diagnosis of PVNS with the mass consisting of a proliferation of fibrohistiocytic cells, abundant haemosiderin, foamy histiocytes, and occasional giant cells.

As recurrence is common in PSVN. We kept the patient under proper follow up last 3 years. Still patient has no complain, no pain, no swelling.

Follow up x-ray shows no osteolysis.

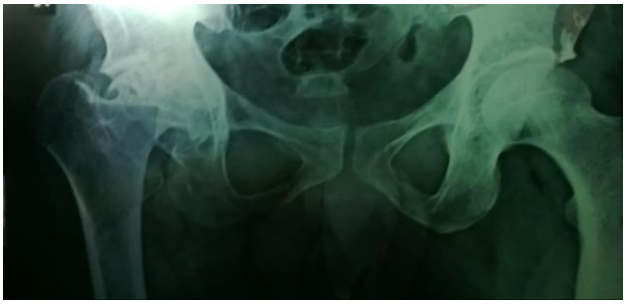

Figure 1: X-ray shows sclerosis and collapse mimicking AVN of femoral head.

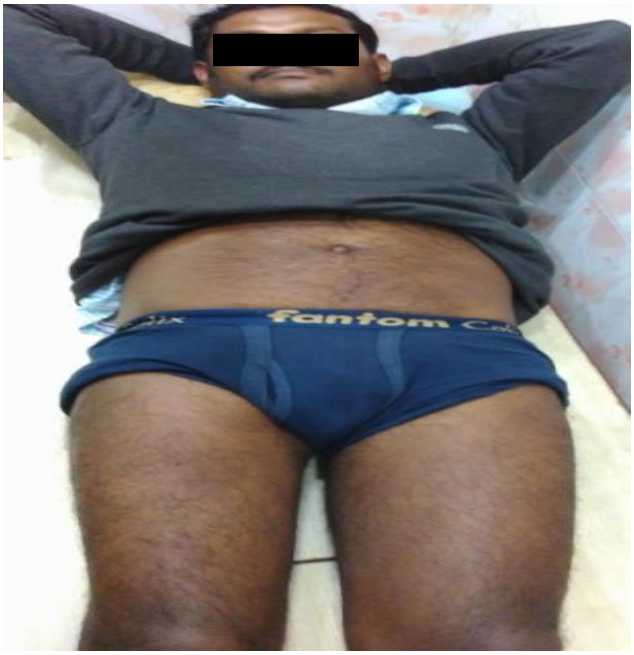

Figure 2: Wasting of RT thigh.

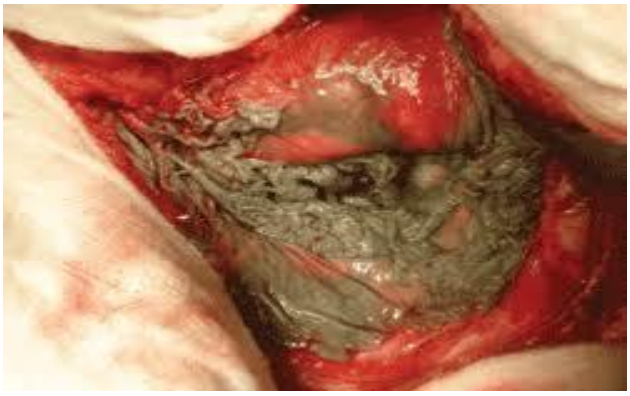

Figure 3: Deep brownish pigmentation of hypertrophic synovium.

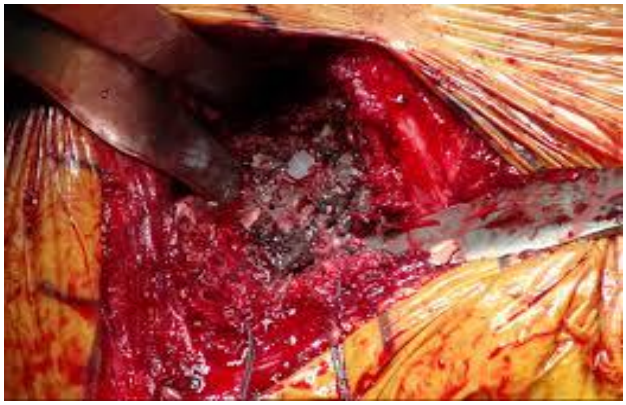

Figure 4: Mouth eaten erosion of acetabulam.

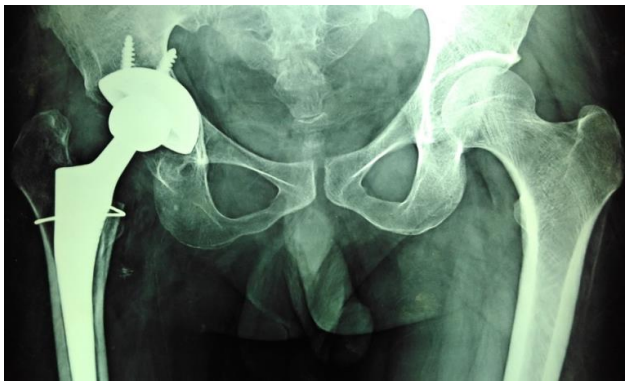

Figure 5: Immediate post OP picture.

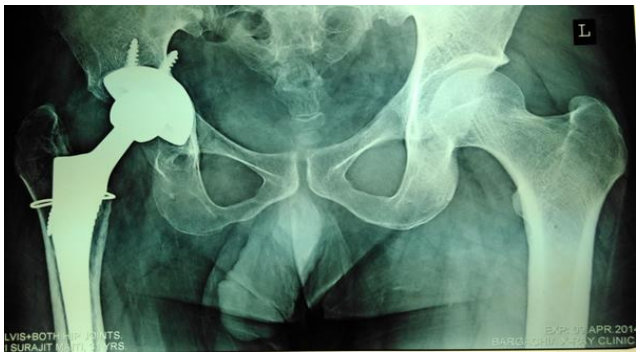

Figure 6: 3 year follow up x ray, no recurrence.

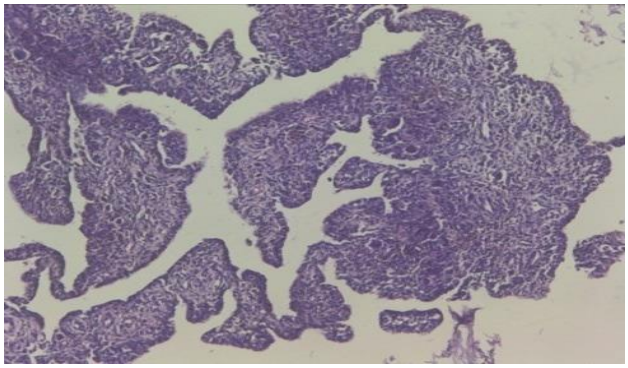

Figure 7: Biopsy shows PSVN.

DISCUSSION

PVNS is benign proliferative disorder of the synovium of unknown etiology.[9] Incidence of PVNS is 1.8 per 1 million population per year.[2,5] PVNS presents as monoarticular lesion & knee joint is most commonly involved but it is also seen in hip, ankle, shoulder, wrist & other joints.

This condition is usually seen in young adults from 20-50 years of age.[1] PVNS may be diffuse or localized form. The diffuse forms occur in 2nd & 3rd decades & the localized/nodular forms occur in 3rd & 5th decades. Plain X-ray shows no abnormality but may show bony erosion. Bony erosions vary according to location of joint & its volume. The pressure exerted by the space occupying lesion leads to atrophy & erosive changes.[12-14] MRI is superior investigation for diagnosis & for planning treatment. Areas of low signal are observed with T1 & T2 weighting in the synovial membrane which are due to classic hemosiderin deposition of PVNS.[12,14] Histological findings show presence of polyhedral cells surrounded by collagen. Giant cells, foam cells, fibrous tissue & hemosiderin are also present.

The treatment of choice for localized/nodular form is marginal excision & diffuse form is total synovectomy. Synovectomy can be either open or arthroscopic. Arthroscopy causes less injury to structures & leads to earlier recovery.[6,10] Recurrence is common but are adequately handled by adjuvant radiation therapy following primary resection. Malignant transformation is rare. After total synovectomy and total hip replacement we need long term follow up for this patient.

CONCLUSION

PVNS is rare entity in orthopedic practice. Commonly seen in males of middle age, but we suggest considering PVNS in hip with destruction can be treated with total synovectomy and total hip replacement. But it need long term follow up to detect recurrence, which needs radiation.

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