Case Report | Odisha Journal Of Orthopaedics and Trauma| January 2021 | 02: 21-23

Solitary Plasmacytoma of Medial End of Clavicle: A Rare Case Report

Avinash Naik[1], K Srikant[1], Debasish Mishra[1]

Abstract

Introduction: Clavicle, an unusual site for expansile lytic lesion of bone with multiple differential diagnostic possibilities and plasmacytoma being one of them, although reported but very rare. Solitary plasmacytoma of bone (SBP) are localized bone tumour consisting of plasma cells with no other clinical features that of multiple myeloma. We are presenting such rare case of solitary plasmacytoma of bone involving medial end of clavicle.

Case Report: A 40-year-old female presented with complaints of pain and swelling in inner aspect of left clavicle since 2 months. Radiographs showed a lytic expansile lesion involving medial end of clavicle and confirmed with CT scan. FNAC was inconclusive and hence excisional biopsy done with provisional diagnosis of giant cell tumour (GCT). Histopathology features suggestive of plasma cell neoplasm like nodules of plasma cells with enlarged nucleus and also IHC quantified plasma cells with stains for kappa and lambda. Skeletal survey, serum and urinary electrophoresis, alkaline phosphatase, haemoglobin, renal function test, ESR, CRP, serum calcium and phosphate levels were within normal limits. Bone marrow biopsy also ruled out the possibility of multiple myeloma hence a possible diagnosis of solitary plasmocytosis of bone was made. Patient was further evaluated by oncologists and subsequently radiotherapy was given. Patient has been in regular follow up since 2 years with no signs of recurrence and multiple myeloma.

Conclusion: Clavicle, although an unusual site of primary bone tumour, should be kept in mind for any swelling around it. Plasmacytoma should also be considered as a differential along with other commoner differentials like GCT, fibrous dysplasia for osteolytic expansile lesions in clavicle.

Keywords: Tumour; Plasmacytoma; Clavicle.

Introduction:

Plasma cell neoplasm (multiple myeloma, solitary plasmacytoma of bone (SPB) and extramedullary plasmacytoma) are characterized by a monoclonal neoplastic proliferation of plasma cells [1]. The new world health organization(WHO) criteria (Jaffe, 2001) define SPB as a 'localised bone tumour consisting of plasma cells identical to those seen in plasma cell myeloma, which appears as a solitary lytic lesion on radiological examination [2]. Plasma cell neoplasm accounts for approximately 1-2% of human malignancies and occur at a rate of 3.5/100000 per year [3]. SPB comprises only 3-5% of all plasma cell neoplasm [1]. Incidence in clavicle is very rare (0.05%) Klippers et.al [4].

[1]Department of Orthopaedics, Kalinga Institute of Medical Sciences, Bhubaneswar, Odisha, India.

Address of Correspondence
Dr. Avinash Naik,
Kalinga Institute of Medical Sciences,
Bhubaneswar, Odisha, India.
E-mail: dravinashnaik@gmail.com

Case Report:

A 40-year-old female presented with complaints of pain and swelling in the inner aspect of the left clavicle for 2 months. Radiographs (Fig. 1) showed a lytic expansile lesion (36x27 mm) involving the medial end of the clavicle and confirmed with a CT scan (Fig. 2).

FNAC was inconclusive and hence excisional biopsy (Fig. 3) done with a provisional diagnosis of giant cell tumour (GCT).

Histopathology features suggestive of plasma cell neoplasm like nodules of plasma cells with an enlarged nucleus (Fig. 4) and also IHC quantified plasma cells with stains for kappa and lambda (Fig. 5, 6).

Skeletal survey, serum and urinary electrophoresis, alkaline phosphatase, haemoglobin, renal function test,

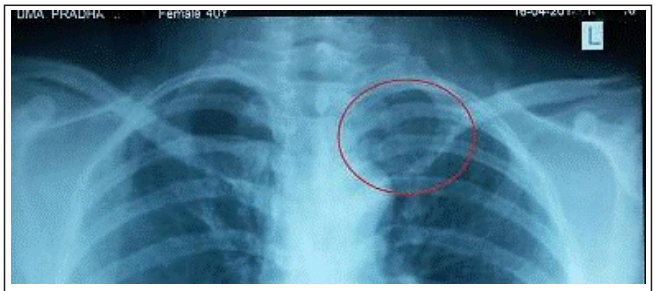

Figure 1: Pre-op X-ray

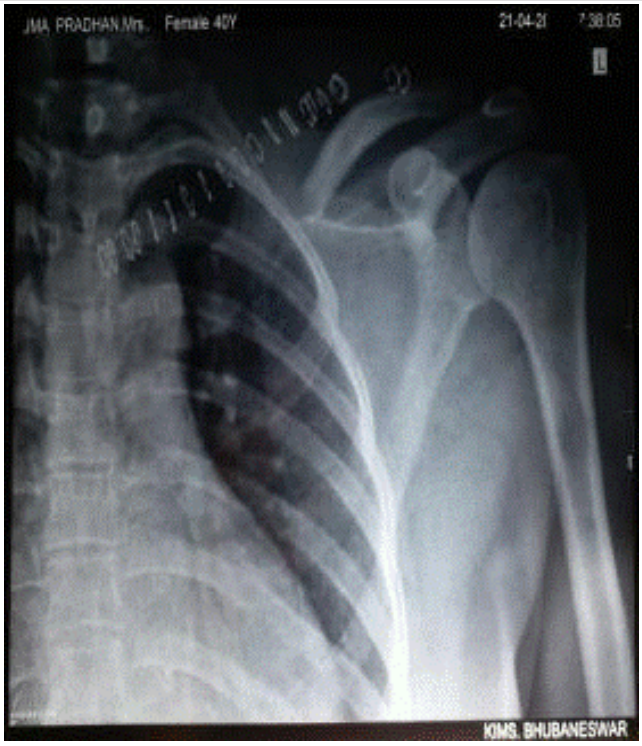

Figure 3: Post-op (Excisional biopsy)

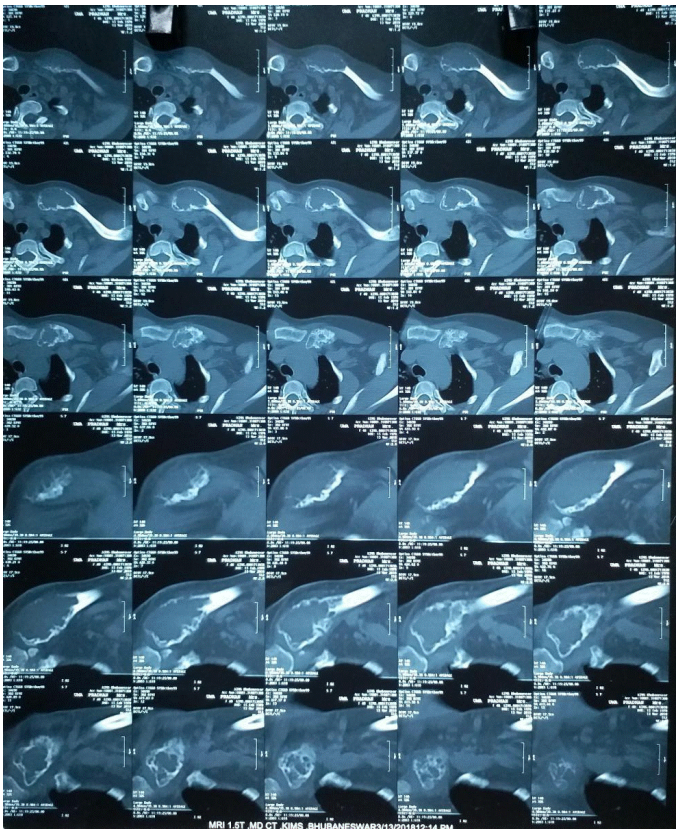

Figure 2: Pre-op CT Scan

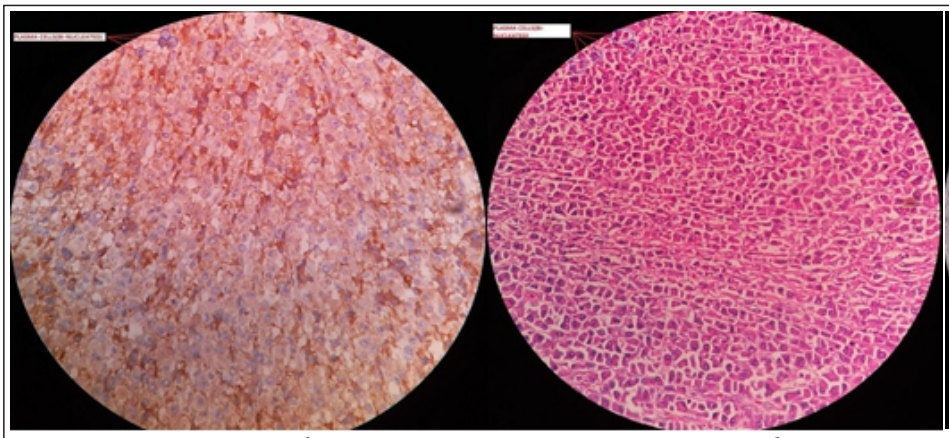

Figure 4: Histology

Figure 5: Histology

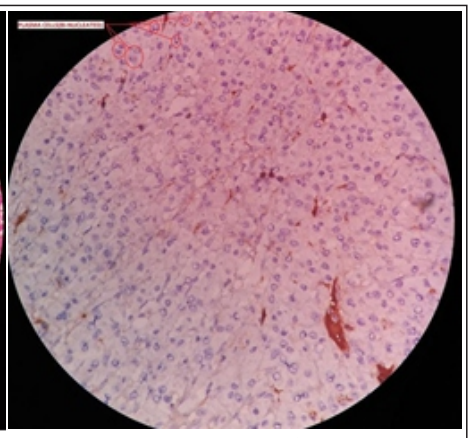

Figure 6: Histology

ESR, CRP, serum calcium and phosphate levels were within normal limits. Bone marrow biopsy also ruled out the possibility of multiple myeloma hence a possible diagnosis of solitary plasmacytosis of bone was made. The patient was further evaluated by oncologists and subsequently, radiotherapy was given. The patient has been in regular follow up for 2 years with no signs of recurrence and multiple myeloma.

Discussion:

Klein et.al found that only 0.45% of more than 1300 primary bone tumours involved the clavicle [5]. Smith et al in a review of 35 primary bone tumours of the clavicle that have been treated at the memorial sloan-ketterin cancer centre that have been treated at the centre reported only 5 benign lesions [6]. Systemic problems such as weakness, weight loss, anaemia, thrombocytopenia, peripheral neuropathy (especially with the osteosclerotic type of multiple myeloma), hypercalcemia or renal failure frequently are present at the time of diagnosis in multiple myeloma but in contrast, these systemic findings are absent in SPB [7].

The patient should be followed even after the local treatment of the disease has been performed because approximately 50-60% of patients with SBP may progress to multiple myeloma over the period of 10-15 years [1].

Conclusion:

Clavicle, although an unusual site of primary bone tumour, should be kept in mind for any swelling around it.

Plasmacytoma should also be considered as a differential along with other commoner differentials like GCT, fibrous dysplasia for osteolytic expansile lesions in the clavicle.

Multiple myeloma should be ruled out at presentation and at long term regular follow-ups to be considered as solitary plasmacytoma of bone after histopathological diagnosis.

References

1. *Dr. Chinmay Biswas, Dr. Chinmay Biswas, Dr. Abhradip Mukherjee, Dr. Soumen Roy, 2016. "Solitary Plasmacytoma of clavicle: A rare case report", International Journal of Current Research, 8, (01), 25387-25389.*
2. *Jaffe ES, Harris NL, Stein H, Vardiman JW (2001) World Health Organization Classification of Tumours: Pathology and Genetics, Tumours of Haematopoietic and Lymphoid Tissues. Ann Oncol 13: 490-491.*
3. *Panagopoulas A, Megas P, Kaisidis A, Dimakopoulos P (2006) Radiotherapy Resistant Solitary Bone Plasmacytoma of clavicle. European journal of Trauma 32:190-193.*
4. *Nirmalesh M & Indranil C & Palash K M & Bidyut K G. (2018). Cytohistopathological Diagnosis of Solitary Plasmacytoma of Clavicle: A Rare Site for a Rare Tumor. Biomed Journal of Scientific & Technical Research. 2. 10.26717/BJSTR.2018.02.000660.*
5. *Kleins, Kuppers R (1999) The New England Journal of Medicine. 341: 1520.*
6. *Shahid M,Hali NZ, Mubeen A, Zaheer S, Julfiqar (2010) Solitary Plasmacytoma of Clavicle-A rare case presentation. J Cytol Histol 1:103. doi:10.4172/2157-7099.1000103.*
7. *Dimopoulos, M.A., Moulopoulos, L.A., Maniatis, A., et al. 2000. Solitary plasmacytoma of bone and asymptomatic multiple myeloma. Blood, 96:20372044.*

Conflict of Interest: NIL
Source of Support: NIL

How to Cite this Article

Naik A, Srikant K, Mishra D | Solitary Plasmacytoma of Medial End of Clavicle: A Rare Case Report | Odisha Journal of Orthopaedics and Trauma | January 2021; 02: 21-23 .