RECURRENT GIANT CELL TUMOUR OF BONE PRESENTING AS A SOFT TISSUE MASS ON 18-FDG PET/CT

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Abstract - Giant cell tumour is an intramedullary bone tumor, composed of mononucleated cells and osteoclasts-like multi-nucleated gaint cells, having an predictable growth potential. Giant cell tumor may transform into a high grade sarcoma. The tumor occur chiefly in the expanded extremities of long bones. Curettage, graft, resection, radiotherapy and amputation are the basic forms of treatment.

OBJECTIVE
18-FDG PET/CT as a diagnostic modality for the diagnosis of recurrent giant cell tumor presenting as soft tissue mass

INTRODUCTION
Giant-cell tumour of bone is a benign, locally invasive tumor that has a local recurrence rate of 27 percent after intralesional excision and 8 percent after marginal excision. The high rate of local recurrence and the occasional development of pulmonary metastasis are manifestations of the locally invasive nature of tumor.
A peripheral rim of ossification has been described as an almost pathognomonic sign of a soft tissue recurrence on radiograph. However a soft tissue recurrence can be difficult to detect in asymptomatic patients in the absence of characteristic ossification.
However in such patients the soft tissue mass can be easily categorised as recurrent giant cell tumour on 18-FDG PET/CT which shows intense uptake of 18-FDG.(SUV max 12.8gms/ml)

PRESENTING COMPLAINTS:-
Known case of giant cell tumor who underwent(Removal of humeral head and total scapulectomy )presenting with swelling in left arm.

CT FINDINGS:-
1. Post operative bone defect in proximal in left humerus with metallic prosthesis which is wired to lateral end of clavicle.
2. Left scapula is not visualised-post operative.
3. Enlarged lymph nodes along the left axillary and brachial arteries-12mm(short axis)
4. Atrophy of left chest wall muscles.
5. Heterogeneously enhancing soft tissue lesion in antero-medial compartment of proximal left upper arm. The lesion is predominantly within the left biceps muscle and is abutting the proximal end of residual humerus. the lesion is well away from the major vascular structures.
PET/CT FINDINGS:

Metabolically active recurrent soft tissue lesion in anteromedial aspect of proximal left upper arm (predominantly within the left biceps muscle)

OPERATIVE FINDINGS:-

Wide local excision of the lesion.

HISTOPATHOLOGY:-

Recurrent Giant cell tumor.

CONCLUSION:-

18-FDG PET/CT can be used as a diagnostic modality in patients presenting as soft tissue masses due to recurrent giant cell tumor of bone to know its aggressiveness and prognosis.

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