Chondromyxoid Fibroma With Fibrosarcomatous Transformation – An Atypical Presentation

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INTRODUCTION:

Fibrosarcomatous transformation of chondromyxoid fibroma (CMF) is rare and dermal metastasis is uncommon for sarcoma. To date, there was no English literature describing CMF with fibrosarcomatous transformation and cutaneous metastasis.

CASE PRESENTATION:

26-year old lady presented with left distal thigh painful swelling for 6 months. Radiographs revealed soft tissue swelling at posterior distal femur with calcifications involving posterior metaphysis of distal femur (figure 1). Magnetic resonance imaging (MRI) showed heterogenous soft tissue mass arising from posterior cortex distal femur with cortical breakage, encasing neurovascular bundle (figure 2). Core needle biopsy done reported as chondrosarcoma (grade 2) with osteoclast like giant cell with mesenchymal component. Wide resection and endoprosthetic reconstruction performed. Histopathologic examination (HPE) impression was fibrosarcomatous transformation of chondromyxoid fibroma with clear margin. No malignant chondroid or osteoid detected. Immunohistochemistry showed tumour immunoreactive for CD99, with a weaker expression of SMA, negative for S100 and Ki67 proliferative index of 0 to 30%.

4 months post resection, patient developed recurrence at the same site with worsening lung metastasis and scalp metastasis. She was treated with palliative chemotherapy.

DISCUSSIONS:

CMF is a rare, benign bone tumor with low risk of malignant transformation. There was only one fibrosarcomatous change of CMF reported. A 58-year old woman developed grade 3 fibrosarcoma, 6 years after treatment of CMF of proximal tibia, which included radiotherapy. The patient died of the disease eventually.[1]

The most frequent metastatic sites of sarcoma are to the lungs. Out of 724 cases with cutaneous metastasis, only 19 cases (2.6%) reported were sarcomas. Actual number of patients with fibrosarcoma were unknown.[2]

CONCLUSION:

CMF still causes diagnostic difficulties due to its rarity and difficulty in obtaining significant population data. This rare tumour is likely to be confused with chondrosarcoma. An accurate diagnosis, including proper cytogenetic and molecular studies is imperative.

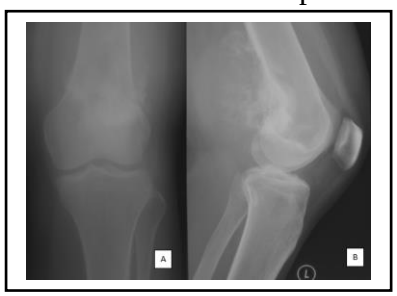

Figure 1: Radiographs showing soft tissue swelling at posterior distal femur with calcifications involving posterior metaphysis on anteroposterior view (A) and lateral view (B).

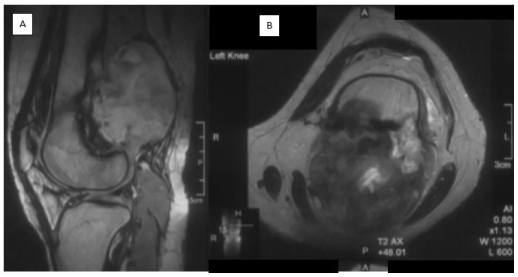

Figure 2: MRI of left knee showing heterogenous soft tissue mass arising from posterior cortex of distal femur with cortical breakage, encasing the neurovascular bundle in sagittal view proton density (PD) sequence (A) and axial view T2 sequence (B).

REFERENCES:

1. Wu et al. (1998). Chondromyxoid fibroma of bone: a clinicopathologic review of 278 cases. *Human pathology*, *29*(5), 438-446.
2. Brownstein et al. (1972). Metastatic tumors of the skin. *Cancer*, *29*(5), 1298-1307.