Tenosynovial Giant Cell Tumor of Diffuse Type in Ankle and Foot - A Case Report

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ABSTRACT

A 18 year old male presented with longitudinally oriented mass at the posteromedial aspect of his left distal lower extremity, most prominent just superior to medial malleolus. FNAC of this lesion is inconclusive Suggestive of Giant Cell Lesion. Conventional radiograph and MR Imaging findings were suggestive of Soft Tissue Sarcoma. Finally biopsy report proved to be out Giant Cell Tumor of Diffuse Type. A below Knee amputed specimen received to the Pathology Department which on Gross dissection showed well encapsulated, multinodular tumor mass. Sections showed benign pattern of tumor tissue conclusive as Giant Cell Tumor of Diffuse Type. It accounts approximately 1.6% of all soft tissue tumors with a substantial incidence of recurrence. Thus to conclude we reported a case of Tenosynovial Giant Cell Tumor of Diffuse Type in Ankle and Foot in a Young Adult.

Key words: Giant Cell Tumor, Diffuse Type, Foot

INTRODUCTION

Giant cell tumor of tendon sheath is a benign solitary tumor which usually arises in the limbs. It occurs most often in the hands where local recurrence after excision has been reported in up to 45% of cases. It is less common in the foot where the biological behaviour and risk of local recurrence have not been defined, Diffuse giant cell tumor of tendon sheath is rare but potentially aggressive lesion that attacks the synovium of joints, tendon sheaths or bursae; 2.5% of cases occur in the foot and ankle. We report a case of diffuse giant cell tumor of tendon sheath in ankle and foot.

CASE PRESENTATION (CLINICAL DETAILS)

A previously healthy 18 year old man presented with a moderately painful slow growing longitudinally oriented mass at the posteromedial aspect of his left distal lower extremity, most prominent just superior to medial malleolus. Overlying skin showed ulcerations. Results of testing of range of motion, sensory and motor functions were unremarkable.

Radiological findings

Conventional radiography of distal lower extremity and ankle revealed large soft tissue mass without bone involvement. MR imaging of the distal lower extremity and ankle showed a large extraarticular soft tissue mass without osseous involvement - Suggestive of Sarcoma.

Biopsy report

A biopsy report for histopathological examination proved to be out Giant Cell Tumor of Diffuse Type (Extraarticular PVNS).

Gross/histopathological findings

A below knee amputed left leg measuring 28×18×12cm. Dissection of Ankle- Foot showed a well encapsulated, rubbery, multinodular , absence of villi, greyish tan to yellow tumor mass measuring 12×8×6cm. Tumor is on the posteromedial side and extending up to calcaneum in the sole of foot.

Histopathological examination showed a well encapsulated tumor tissue comprised of round to polygonal cells...
Figure 1: Photograph of distal lower extremity showing a longitudinally oriented mass at the posteromedial side with skin ulcerations.

Figure 2: Conventional radiograph of distal lower extremity and ankle revealed large soft tissue mass without bone involvement.
Figure 3: MRI t1 sagital image showing tumor extension in the sole of foot.

Figure 4: Photograph of distal lower extremity showing tumor mass.
Figure 5: Photograph of dissection of Ankle-Foot showing well encapsulated, rubbery, multinodular, greyish tan to yellow tumor mass.

Figure 6: Photograph showing tumor mass extending up to calcaneum in the sole of foot.
Figure 7: Photomicrograph showing diffusely scattered multinucleated giant cells
Figure 8: Photomicrograph showing sheets of xanthoma cells laden with hemosiderin.
having clear cytoplasm. Many of these cells are laden with hemosiderin. The tumor tissue is interrupted by cleft like or pseudoglandular spaces. Amidst these seen diffusely scattered multinucleated giant cells, xanthoma cells laden with hemosiderin and chronic inflammatory cells. No evidence of features of malignancy.

**DISCUSSION**

Diffuse giant cell tumor of tendon sheath comprises approximately 1.6% of all soft tissue tumors and is characteristically a benign peritendinous fibrous mass. GCT of TS is a benign soft tissue tumor arises from complex tendon sheath. It occurs most commonly in the fingers and less in the ankle and foot. Granowitz and mankin divided GCT of TS in two forms localized (nodular) and diffuse. Both forms can occur in the foot and ankle. Compared with localized giant cell tumor this form is uncommon. (Table-1)

Anatomic Distribution of Diffuse Giant Cell Tumor of Tendon Sheath (40 patients) and exhibits certain clinical differences. There is tendency for these lesions to occur in young persons. Diffuse Giant cell tumor of tendon sheath is aggressive disease with substantial incidence of regrowth. When found in the foot and ankle, the large number of joints in this region and the lack of integrity of the superficial muscle layers assist in allowing spread to adjacent articular spaces.

**CONCLUSION**

To conclude we reported a case of Tenosynovial Giant Cell Tumor of Diffuse Type in Ankle and Foot in a young adult.

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**REFERENCES**