Case Report:
Soft Tissue Chondromas - Study of Five Cases

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Abstract: Extraskeletal soft tissue chondroma is a rare benign neoplasm predominantly composed of mature hyaline cartilage. It develops in the soft tissues without any connection to bone cortex, intra-articular synovium, or periosteum. It could have atypical features both radiological and histopathological simulating malignant tumors. We herein report 5 cases of soft tissue chondromas with their histopathological and radiological features and review the literature.

Key Words: Extraskeletal chondroma, benign, soft tissue

Introduction:
Chondromas are classified according to their location as enchondroma, periosteal chondroma and the extraskeletal soft tissue chondroma. Extraskeletal soft tissue chondroma is a rare slowly growing benign tumour with predilection for hands and feet [1]. It affects both sexes equally with peak incidence between 30-60 years of age. It may arise from the synovial sheath of the long tendons, paratendinous soft tissues or the para-articular tissues [2]. Extraskeletal chondromas are composed of hyaline cartilage with focal calcification and some may show worrying radiological and histological pictures simulating chondrosarcoma [3]. The clinical, radiological and cytological triad is important for the correct diagnosis of soft tissue chondroma despite worrying cellular atypia. Approximately 10% of soft tissue chondromas contain epitheloid histiocytes and multinucleated giant cells [4].

Case Reports:
Case 1
A 32 year old woman had a progressive swelling of the right calcaneum for a year. Physical examination revealed a large, firm and tender mass on the calcaneum. There were no other subcutaneous masses. Plain radiograph revealed an anteroposterior soft tissue mass, with dense in homogenous calcification. There was no bone erosion or periosteal reaction (Figure No.1a) Fine needle aspiration cytology of the mass reveal chondrocytes in a cartilaginous matrix with mild insignificant cellular atypia (Figure No.1b). The overall picture was suggestive of neoplasm of cartilaginous origin. The swelling was excised completely. Histological assessment of the resected specimen confirmed a soft tissue chondroma characterized by chondrocytes in hyaline matrix with occasional cells showing mild focal cellular atypia (Figure No.1 c).

Case 2
A 12 year old boy had a fixed hard lump in the 2nd metatarsal of the right foot for 6 months. An X-ray of the anterior-posterior and lateral view showed a normal bony skeleton of the foot. There was a soft tissue mass with focal incomplete calcification and no bony involvement. The periosteum was intact (Figure No.2a). Fine needle aspiration cytology of the mass was suggestive of cartilaginous neoplasm (Figure No.2b). A 2.5 cm mass with an osseous core completely separate from the adjacent bone was excised. Histopathological examination showed a peripheral shell of hyaline cartilage merging with fibrous tissue. Parly inflected cancellous lamellar bone was present at the centre (Figure No.2c).
A 19 years old female presented with swelling over left toe for last 5 months. On palpation the swelling was tender. There was no history of trauma. X-ray revealed a soft tissue mass in left toe with no bony involvement. Excision was performed. Gross revealed approximately 3 cm circumscribed soft tissue mass greyish white in color. Microscopic examination revealed lobules of mature hyaline cartilage with surrounding fibrous tissue and without any areas of calcification or atypia (Figure No. 5a,b,c).

Case 5

A 19 years old female presented with swelling over left toe for last 5 months. On palpation the swelling was tender. There was no history of trauma. X-ray revealed a soft tissue mass in left toe with no bony involvement. Excision was performed. Gross revealed approximately 3 cm circumscribed soft tissue mass greyish white in color. Microscopic examination revealed lobules of mature hyaline cartilage with surrounding fibrous tissue and without any areas of calcification or atypia (Figure No. 5a,b,c).

Conclusion:
Extraskeletal Chondromas is a benign lesion that sometimes could have atypical features simulating malignant tumors. Thus, it is important that a pathologist should be aware of these features to arrive at the correct diagnosis.

References: