

Solid Tumour Section

Short Communication

Bone: Chondromyxoid fibroma

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Identity

Note

Chondromyxoid fibroma is a benign cartilaginous bone tumour composed of lobules of chondroid and myxoid matrix formed by spindle or stellate shaped cells.



Radiology of Chondromyxoid fibroma.
Fig. 1: Plain film radiograph shows lytic, oval, bubbly lesion with sclerotic rims.

Clinics and pathology

Epidemiology

Chondromyxoid fibroma is a very rare neoplasm accounting for less than 1% of all bone tumours, and less of 2% of all benign bone tumours.

Despite 75% of the cases occur in patients younger than 30 years of age, a wide range is reported (4-79 year) Males are slightly more commonly affected.

Clinics

A long story of mild pain is reported at the first clinical examination. Bones of the lower extremity are more often affected, with a peculiar predilection for the metaphyseal region. Radiology shows an eccentric lytic lesion (wide size range: 1-14 cm), with a sclerotic rim, and ovoid shape (paralleling the long axis of the bone) with bubbly appearance.

Pathology

Histologically the tumours show a multilobular pattern. The size of the lobules varies from tumour to tumour as well as from field to field. They are composed of fibrous, myxomatous and chondroid areas. However frank hyaline cartilage is less often recognized. The neoplastic cells vary in shape from spindle to stellate, focally atypical nuclei are recognized in 20-30% of the cases. Usually the centre of the lobules is less cellular than the periphery. At the edge of the latter, giant cells can often be recognised. Chunky calcification can be present, especially in older patients.

Treatment

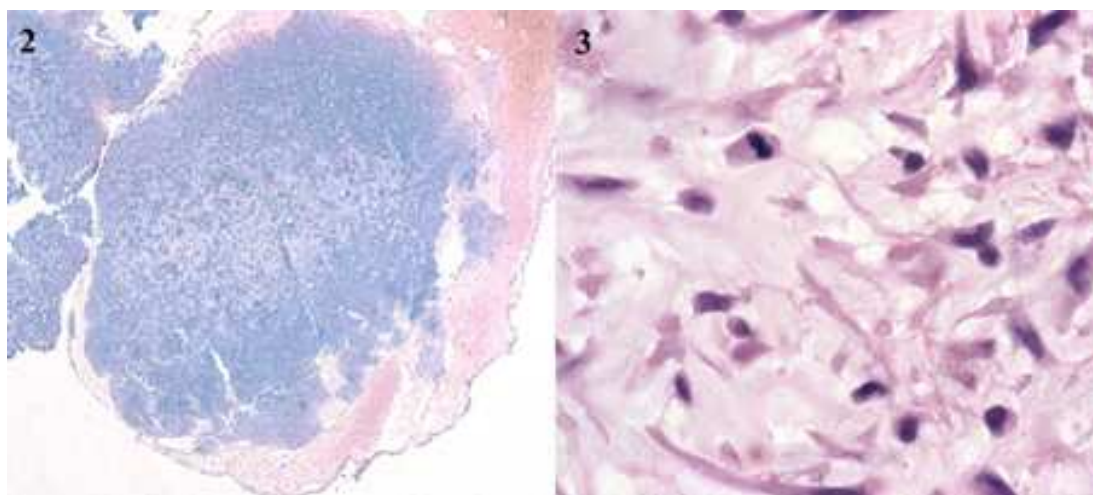
Simple curettage is the standard treatment.

Evolution

The rate of recurrence is 15%.

Prognosis

The prognosis is excellent.



Histological features of Chondromyxoid fibroma.

Fig. 2: Lobules of myxoid matrix are evident at low magnification (Alcian blue stain).

Fig. 3: At higher magnification the neoplastic cells show spindle to stellate shape (Haematoxylin-Eosin stain).

Cytogenetics

Cytogenetics Morphological

Karyotypes of 12 cases are reported in the literature. Complex cytogenetic abnormalities are reported. In ten cases chromosome 6 appears to be involved and non-random clonal abnormalities involving 6p25, 6q13 and 6q23 are reported. Of interest 4 cases with pericentromeric inversion are described [3 cases inv(6)(p13q25) and 1 case inv(6)(p13q23)].

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