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Yamamoto, Tetsuji
Mizuno, Kosaku

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CHONDROMYXOID FIBROMA OF THE FINGER

Tetsuji YAMAMOTO and Kosaku MIZUNO

Department of Orthopaedic Surgery,
Kobe University School of Medicine

INDEXING WORDS

chondromyxoid fibroma; finger; phalanx

SYNOPSIS

We report a case of chondromyxoid fibroma arising from the middle phalanx of the index finger. The radiographic and pathologic findings are described.

INTRODUCTION

Chondromyxoid fibromas (CMF) represent only 0.5% of all primary bone tumors and CMF involving the small bones of the hands is rare, accounting for approximately 0.3% of all CMFs.[4] We present an extremely rare case of CMF arising from the middle phalanx of the index finger of the hand, breaking through the cortex to extend into the subcutaneous tissue in a 33-year-old male.

CASE REPORT

In January 1993, a 33-year-old male was referred to our hospital for examination of a small mass on the dorsal side of the index of the right hand. He noticed it at the age of 18. The tumor scarcely grew in size for over 10 years.

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Authors' names in Japanese: 山本哲司、水野耕作

However, it became a little larger with mild pain before admission, which brought him to the hospital. Physical examination revealed a palpable small mass on the dorsal side of the middle phalanx. Radiographic examination revealed osteolysis of the middle phalanx of the index finger with slight marginal sclerosis (Fig 1). In MR imaging, T1-weighted images revealed a hypointense tumor and T2-weighted images revealed a hyperintense tumor which extended into the soft tissue. CT showed partial destruction of the dorsal cortex. Bone scan revealed an increased uptake in the right index finger. The patient underwent curettage and bone grafting. The pathologic diagnosis was CMF. The postoperative course was uneventful and there was no recurrence 6 years after surgery.

PATHOLOGIC FINDINGS

Gross findings:

On gross examination, the tumor was rubbery and grayish-tan. The intraosseous lesion included microcalcification in some portions.

Cytologic findings:

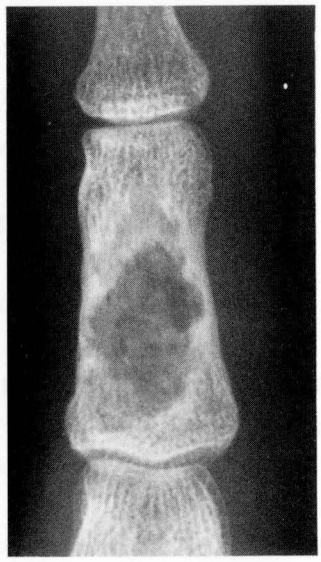
The preoperative fine needle aspiration biopsy revealed nests of benign-appearing short spindle cells in the myxoid matrix.

Histopathologic findings:

Microscopic study revealed that the extraskeletal lesion was made up of relatively well-defined lobules with a wide myxoid central zone and a narrow dense peripheral zone supported by a collagenous matrix (Fig 2). The small vessels were confined to the peripheral dense cellular zone where there were few small giant cells. There were a few small island of cartilaginous tissue at the periphery of the lobules as a component of the tumor. The tumor cells were elongated and lacked cellular atypia. The matrix stained positively with alcian blue stain. PAS positive materials were present within the cytoplasm.

DISCUSSION

Seventy percent or more CMFs occur in the lower limbs, so that it is rare to find it in the small bones of the hands, [7] which account for only about 0.3% of all cases.[4] So



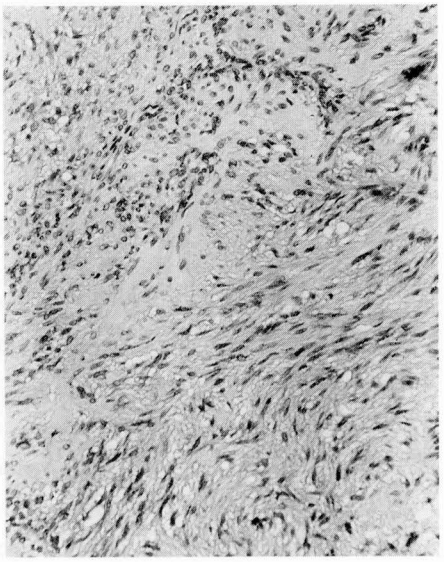


Fig.1. (left) and Fig. 2. (right)

Fig.1. Anteroposterior radiograph reveals osteolysis with marginal sclerosis in the middle phalanx of the right index finger.

Fig.2. Photomicrograph showing loosely arranged spindle cells in the myxoid matrix (hematoxylin and eosin stain, X 100).

far, about 10 cases of CMF of the hands have been reported. Most of them described the tumors arising from the carpal bones, [2] metacarpals [3, 6] and proximal phalanges.[1] In reviewing the hands in the literature, we could not find CMFs which arose from the middle phalanx of the hand.

The present case of CMF is unusual as it was initially noticed as a soft tissue tumor. It is speculated that the tumor developed eccentrically in the diaphysis of the phalanx and broke the cortex and invaded the soft tissue while the intraosseous tumor was enlarging. It is rare for CMF to form extraskeletal lesion. As far as we know, CMF with extraskeletal lesions seem to occur when it arises from the small bones of the hands and feet, or when a tumor is huge. [5]

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