Intraosseous epidermoid cyst of the finger phalanx: a case report

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ABSTRACT

Epidermoid cysts of the finger phalanx are rare pseudotumours. They are benign lesions with a satisfactory outcome after excision. We describe a case of an epidermoid cyst in the distal phalanx of the ring finger. It was treated successfully and the patient had excellent functional results and radiological healing at one-year follow-up.

Key words: finger phalanges; epidermal cyst

INTRODUCTION

An epidermoid bone cyst commonly affects the skull or finger phalanges and presents as a lytic lesion or a pseudotumour. It is regarded as a traumatic or an iatrogenic lesion and can be clinically and radiologically deceptive. This paper presents a rare intraosseous tumour of the distal phalanx of the ring finger.

CASE REPORT

In March 2003, a 48-year-old man presented with a 2-week history of painful enlargement of the right ring finger. The patient had sustained an injury to his finger one year previously after which the finger enlarged gradually and painlessly for the first few months. There was no fever or night pain. Clinical examination revealed a swollen distal phalanx of the right ring finger with bulging of the nail bed. Sensation and circulation and all blood tests were normal. Radiography showed a radiolucent lesion involving the distal phalanx that caused bone expansion and cortical thinning (Fig.1).

Initial differential diagnoses included osteomyelitis, enchondroma, gout, and a bone cyst. Intraoperatively, the bone cortex was as thin as an eggshell; when the lesion was incised, creamy material was
released, and a thick layer of tissue was peeled from within the cavity of the lesion. Histopathological examination revealed that the wall of the cyst was composed of squamous cells, and the cavity was full of keratinised lamellar material (Fig. 2).

Postoperative recovery was uneventful. Remoulding of the distal phalanx was progressive and radiographs taken at one-year follow-up revealed complete healing of the bone defect (Fig. 3), with a normal-looking finger and nail.

DISCUSSION

Epidermoid bone cysts are rare and usually involve the skull and the phalanges. The most common site for phalangeal involvement is the distal phalanx of the fingers.\(^1\)\(^-\)\(^3\) They are regarded as congenital, traumatic, or iatrogenic in origin.\(^4\) Some studies have suggested that the origin of a phalangeal cyst is either directly caused by traumatic implantation of epidermal fragments into the bone by any type of injury,\(^3\)\(^,\)\(^5\) or due to migration of a fragment of the nail bed into the phalangeal bone.\(^6\)

Diagnosing epidermoid bone cysts can be a clinical and radiological challenge. Differential diagnoses include chronic infection or a chondroma, intraosseous ganglion, bone cyst, giant cell tumour, even a metastatic lesion.\(^3\)\(^,\)\(^7\) The radiological features seen in phalangeal or cranial bones with epidermoid cysts are relatively well known: a well-defined osteolytic lesion with a sclerotic margin, with or without soft-tissue swelling. This differs from the pattern of poorly defined osteolysis that accompanies skeletal infection and metastasis. To help make surgical decisions and avoid unnecessary procedures, an epidermoid cyst should be included in the differential diagnosis of a radiolucent osseous neoplasm of the finger. Adequate curettage and removal of the cyst capsule are essential to avoid recurrence; bone grafting is usually not necessary.\(^8\)
Histopathological evaluation is necessary for the correct diagnosis; a needle aspiration may be sufficient for making a correct preoperative diagnosis if enough keratin or sebaceous material is obtained.

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REFERENCES