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EPIDERMAL BONE CYST OF THE FINGER

A Case Report

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An epidermal cyst of the terminal phalanges of the fingers is a rare finding. The present work deals with some of the clinical and pathological aspects of such a case seen by the authors.

Key words: bone neoplasms; epidermal bone cyst

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Epidermal cysts of bone are quite rare. Most of them occur in the skull, but they may occasionally be observed in the distal phalanges (Bissel & Brunschwig 1937, Kleinsasser & Albrecht 1957, Roth 1964, Dahlin 1967, Lichtenstein 1970).

Because of the rarity of phalangeal epidermal cysts, the presentation of such a case may be of interest.

CASE REPORT

A 33-year-old man had for many years noticed a thickening of the distal phalanx of his left little finger, but it had not caused any discomfort.

He visited his doctor because of acute pain in the finger following a slight trauma. The primary treatment was for a fracture without dislocation.

A couple of weeks later he was admitted to the hospital because of further symptoms. X-ray showed a cystic tumour occupying most of the terminal phalanx. The outline of the tumour was fairly well demarcated although with some cortical usuration. A fracture line was seen crossing the cyst (Figure 1). Clinically the diagnosis was that of an enchondroma. Primary amputation of the terminal phalanx was performed because of the extension and localisation of the lesion.

Pathological examination

The specimen consisted of the distal phalanx of the left little finger. It was cut longitudinally at the midline. Most of the bony phalanx was occupied by a cystic tumour with greasy, greyish coloured masses in the lumen (Figure 2).

Histological sections through the entire phalanx were prepared and stained with haematoxylin-eosin, Azan-Heidenhain and Weigert's Elastin-van Giesson.

Apart from a small area, the cyst wall was seen microscopically to be lined by a regular stratified squamous epithelium. The epithelium varied in thickness, in many places with multiple layered stratum spinosum and granulosum. The cyst lumen was filled with stratified horny masses and fatty material (Figure 3). Where the covering epithelium was missing a mainly histiocytic reaction with several giant cells of the foreign type was seen. In this area the corticalis seemed to be destroyed too, but the soft tissue outside tne bone was only minimally affected.

DISCUSSION

According to the literature most of the patients with epidermal cysts of the phalanges are young male adults, as in the present case. A traumatic origin of the cysts following a mild to severe

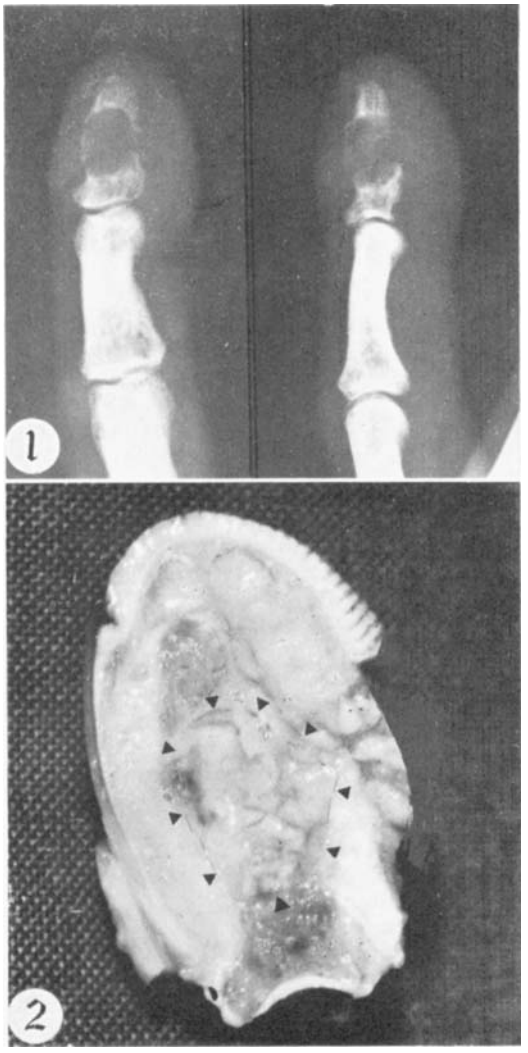

Figure 1. Roentgenograms (anteroposterior and oblique views) showing a lytic defect with a thin sclerotic border. A fracture line is seen traversing the cyst.

Figure 2. Longitudinal section through the terminal phalanx of the little finger. The border of the cyst is marked.

crushing type of injury is suggested by most authors. Injuries to the nailbed seem in this connection to be of importance (Behrens 1931, Fisher et al. 1958, Roth 1964).

As in the present lesion, epidermal cysts may easily be confused clinically with enchondroma, more rarely with osteomyelitis. The clinical symptoms which in our case seemed classic are not different from those of enchondroma. Radiographically epidermal cysts appear as rounded lytic areas with clearly defined borders without the mottled appearance often seen in enchondroma. The distinction may however be difficult to make (Bissel & Brunschwig 1937, Fisher et al. 1958, Lichtenstein 1972).

A definitive diagnosis is established by histological examination and is dependent upon the demonstration of a squamous epithelial lining in at least some portion of the cyst wall. In cases with curetted material and prominent granulomatous reaction the impression of a benign giant cell tumour may be obtained, especially if the material is sparce (Fisher et al. 1958).

The treatment of choice is curettage

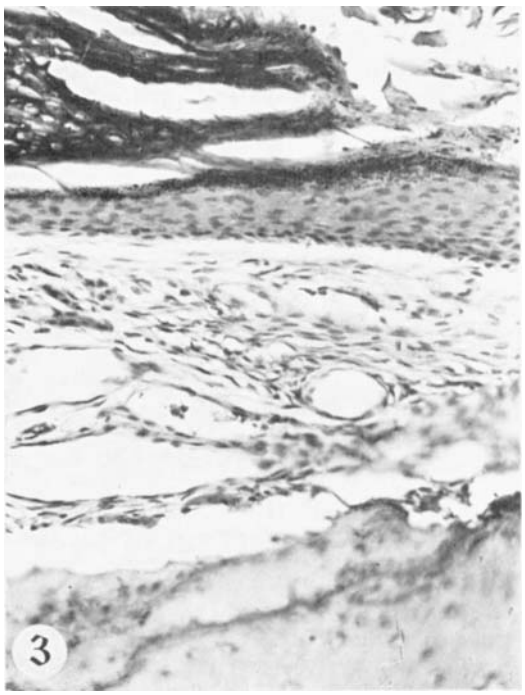

Figure 3. Histological specimen showing the epidermal cyst within the bone. Horny stratified material is seen in the lumen (H.E. × 175).

possibly with filling of the bony defect. Recurrence seems to be rare. Because of a marked bony defect an amputation may have to be performed as in the present case. (Roth 1964).

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