SQUAMOUS-CELLED CARCINOMA OF THE NAIL BED

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Squamous-celled epithelioma of the nail bed or sulcus is a well-known but uncommon type of neoplasm, examples of which have been recorded by Sigel (1937), Bunnell (1944), and Willis (1948). It is often mistaken for chronic paronychia. The insidious progress of the tumour, and the frequency with which it is wrongly diagnosed, make it of interest and importance.

The tumour must be distinguished from malignant melanoma of the nail. Both are found more often in the fingers than the toes, and the thumb is the digit most often affected, the right more so than the left. Some fifteen cases involving the hand have been recorded in

FIG. 1

Radiograph of both thumbs in Case 1. The terminal phalanx of the left thumb had already been amputated for what was believed to have been a whitlow. There is now almost complete destruction of the proximal phalanx.

the literature, mostly in men over the age of sixty years. There is often a history of trauma or infection which proved resistant to treatment.

Metastases in the phalanges of the hand from bronchial carcinoma, as described by Colson and Willcox (1948), must also be considered in the differential diagnosis.

CASE REPORTS

The three cases described here are sufficiently typical to make a general description of the history, progress, and pathology of these tumours unnecessary.

Case 1—A man, aged seventy-three years, had been treated by his doctor for a whitlow of the right thumb. The condition proved resistant to conservative treatment and radiographs

showed erosion of the terminal phalanx; disarticulation was therefore performed at the interphalangeal joint. The scar broke down and two or three minute sinuses discharged material which the patient likened to small quantities of tooth-paste.

Seven months after first coming under observation the sinuses were still present, but without signs of inflammation. The remaining part of the thumb was thickened; the overlying skin was red and there was slight tenderness. Radiographs (Fig. 1) showed almost complete destruction of the shaft of the proximal phalanx, leaving the base of the bone and a few flakes at the distal end.

The patient died of a perforated duodenal ulcer. Necropsy showed no evidence of visceral metastasis or of a primary tumour elsewhere. The axillary glands were not examined. Section of the thumb showed that the proximal phalanx was largely replaced by a white tumour (Fig. 2). Histological examination showed that it was a heavily keratinised squamous-celled epithelioma invading the bone (Fig. 3).

FIG. 2

FIG. 3

Section of the thumb at post-mortem examination shows that the phalanx is replaced by a white tumour (Fig. 2). Microscopic examination shows a heavily keratinised squamous-celled carcinoma with prickle cells, invading the bone (Fig. 3—stained haematoxylin and eosin— $\times 10$).

Case 2—A man, aged sixty-six years, had a whitlow of the thumb which resulted in loss of the nail. It was treated by fomentations. Three years later the thumb swelled and became painful. Amputation was performed.

The specimen showed a tumour 3 cm. $\times$ 1 cm. $\times$ 2.1 cm. at the tip of the thumb in the region of the nail which was missing. An ulcer with necrotic base and indurated thickened edges was visible in the nail bed. The cut surface presented a pink-white mass with haemorrhagic areas towards the centre. The terminal phalanx was completely destroyed.

Case 3—A woman, aged seventy years, had noticed swelling of the terminal phalanx of the right middle finger for three years. After one and a half years the skin broke down but radiographic examination showed no bone involvement. Amputation was performed.

The specimen presented a tumour 1.5 cm. × 1 cm. × 1.1 cm. lying under the nail and protruding distally. The skin over the tumour was pale, and close to the nail margin there was a small ulcer with thickened raised edges. The cut surface of the tumour was in parts white and necrotic, and it was invading the terminal phalanx. Histological section showed an atypical squamous-celled carcinoma invading bone.

Comment—The frequency of bone involvement in squamous-celled carcinoma of the nail bed is greater than previous descriptions would suggest. The liability to metastasis in the axillary glands makes their removal, as well as amputation of the digit, the treatment of choice.

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