Basal Cell Epithelioma Involving a Finger

MITSUNARI HIGUCHI, OSAMU MORI AND HIROSHI HACHISUKA

Department of Dermatology, Kurume University School of Medicine, Kurume, 830 Japan

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An 84-year-old Japanese male was first seen on Jan. 11, 1988, for an ulcerated lesion on the lateral surface of the proximal phalanx of the right ring finger. About five years prior to the consultation, he noticed the lesion as a rice sized skin colored papule. It had gradually increased in size and then undergone a central ulceration. He finally sought medical attention when the lesion started to ooze a secretion. When the patient arrived at the dermatology clinic, the lesion was observed as a sharply circumscribed ulcer of about 1 cm in greatest diameter with a dusky red, partially blackish, irregular surface (Fig. 1). On physical examination, no other skin lesions, such as pits, were found over the palms and soles. There was no indication that the patient had been exposed to radiation, burn or trauma before the appearance of the lesion. A clinical diagnosis of Bowen’s disease was made and an incisional biopsy was performed.

The hematoxylin and eosin specimen revealed masses of basaloid cells of various shapes and sizes embedded in the dermis (Fig. 2). The cells of the tumor nest had large and oval nuclei and relatively little cytoplasm. The peripheral cell layer of the tumor masses showed a palisade arrangement of the nuclei (Fig. 3). Consequently, a histological diagnosis of solid basal cell epithelioma was made. On Feb. 12, 1988, surgical excision and a full thickness skin graft were performed under local anesthesia. The patient has been free of recurrence for about 6 months.

Fig. 1. An ulcerated lesion on the lateral surface of the proximal phalanx of the right ring finger.
Histologically documented cases of basal cell epithelioma of the fingers are described in the English literature (Enna, 1978; Mikhail, 1985). However, most of the lesions involving fingers are in the sub-or-peri-ungual region. If cases of nevoid basal cell epithelioma are included, lesions on fingers become more common. Our patient did not suffer from nevoid basal cell epithelioma syndrome. Basal cell epithelioma in this location simulates several conditions including squamous cell carcinoma, Bowen's disease or eccrine poroma. However, it is not difficult to differentiate by histological findings between basal cell epithelioma and other conditions. According to a current, widely accepted concept, basal cell epithelioma originates from pluripotential cells which have the potential to form hair, sebaceous glands, and apocrine glands (Lever and Schaumburg-Lever, 1983). The rarity of basal cell epithelioma on the palms and soles implies that cells with the potential to differentiate toward eccrine glands, rarely participate in tumor formation. In addition, Covo (1971) concluded that the palms and soles do not possess the stromal factor necessary for the formation of the basal cell epithelioma. The lateral site of the finger is devoid of hair follicles, sebaceous glands and apocrine glands, as are the palms and soles. Interestingly, basal cell epithelioma on the palm in the nevoid basal cell epithelioma syndrome has been reported to be associated with the distal portion of the eccrine sweat ducts (Holubar et al. 1970). In our case the same finding was observed. This observation suggests that ductal epithelium cannot be excluded as the origin. Sunshine is known to be one of the predisposing stimuli which induce the cells with pluripotentiality to become a carcinoma and lead to basal cell epithelioma. Low dose exposure to sunshine might cause the further rarity of a single case of basal cell epithelioma on the fingers, palms or soles.
References


