

Deep Dermal Invasion of Keratoacanthoma of the Face

Sir,

We here describe 2 patients with keratoacanthoma, whose lesions on the lip and the nose reached even the opposite mucosal surface of the lip or the ala nasi.

CASE REPORTS

Case 1

A 64-year-old Japanese man visited us because of a 3-cm, dome-shaped, center-depressed nodule on the right side of his jaw, which had been growing rapidly for the past 1 month (Fig. 1). An incisional



Fig. 1. Clinical appearance of keratoacanthoma on the right side of the jaw of Case 1.

biopsy specimen showed masses of slightly atypical, eosinophilic squamous cells. In the tumor masses, there were intraepithelial abscesses. Under a diagnosis of keratoacanthoma we closely followed him without any therapeutic intervention. During the next 6 weeks, the nodule still continued to expand and we noticed the development of multiple yellowish white spots, 1 mm in diameter, in the oral mucosal surface of the lower lip just corresponding to the site of the nodule (Fig. 2). We biopsied the nodule again and found only multiple epidermal cysts filled with horny material. Several weeks later, the nodule began to decrease in size gradually. Seven months later, we noticed total disappearance of the nodule with clearance of the whitish spots visible from the oral mucosa. No recurrence was observed during the following 9 years.



Fig. 2. Multiple yellowish white spots in the oral mucosa of the right lower lip, corresponding to the keratoacanthoma in Case 1.

Case 2

A 38-year-old Japanese woman was presented with a 1.3-cm, painful nodule with a depressed center which had started to grow on the left ala nasi 2 weeks previously (Fig. 3). Histopathology of the nodule revealed a mass of proliferating squamous epithelium associated with horn-filled invagination. The tumor cells showed maturation with eosinophilic cytoplasm. Under a diagnosis of keratoacanthoma we treated it with intralesional injections of bleomycin dissolved in saline at a concentration of 2.5 mg/ml. With this treatment it gradually became smaller, but 1 week later we noticed the development of a dome-shaped papule with a depressed center in the mucous membrane of the nasal vestibulum, immediately beneath the cutaneous nodule (Fig. 4). Although the nodule on the ala nasi disappeared, with a puckered scar, during the subsequent 2 weeks, the papule



Fig. 3. Clinical appearance of keratoacanthoma on the left ala nasi of Case 2.



Fig. 4. Clinical appearance of a protruding papule with a central crater in nasal vestibulum immediately beneath keratoacanthoma of Case 2.

beneath it in the nasal cavity lasted without involution for 1 month. Thus, we excised it and found a histologically epidermal cyst filled with horny material. There was no recurrence of the nodule on the ala nasi or that of the nasal vestibulum during the following 7 years.

DISCUSSION

Keratoacanthoma has many features in common with squamous cell carcinoma clinically and histopathologically, although it shows several characteristics that differ from the latter. Thus, if there is doubt about the diagnosis, excision of the entire lesion is recommended, especially in immune-suppressed patients, because the differential diagnosis of keratoacanthoma from a low-grade squamous cell carcinoma is sometimes difficult (2,3). One of the practical ways to clinically differentiate keratoacanthoma from squamous cell carcinoma is intralesional injection of a diluted solution of bleomycin together with 0.5% lignocaine, which not only allows one to obtain a small biopsy specimen for histopathological study but also shortens the subsequent regressing process in the case of keratoacanthoma (1). In our 2 patients we made the diagnosis of keratoacanthoma definitely, based on their clinical features, involutinal courses without recurrence and histopathological demonstration of horny mass-filled epidermal cysts at their end stage, in addition to the rapid therapeutic response to intralesional bleomycin observed in Case 2 (1).

The remarkable findings in our cases are the presence of mucosal changes visible just beneath the lesions of keratoacanthoma, because these tumors invaded the skin downward so destructively. Although a deep invading tendency is associated with malignant epithelial tumors in general (2,3), our cases provided evidence that such a behavior is observable even in keratoacanthoma only when it develops at such special locations as the nose, lip and probably the eyelid, where visible mucosal surfaces rather closely underlie the skin tissue. In our 2 cases we could confirm the deep invading tendency of facial keratoacanthoma even clinically, when it arose in the skin opposing the oral or nasal mucosae. Keratoacanthoma of the nail bed also shares such behavior and it extends deeply to destroy the underlying bone (4).

REFERENCES

1. Sayama S, Tagami H. Treatment of keratoacanthoma with intralesional bleomycin. *Br J Dermatol* 1983; 109: 449-452.
2. Kern WH, McCray MK. The histopathological differentiation of keratoacanthoma and squamous cell carcinoma of the skin. *J Cutan Pathol* 1980; 7: 318-325.
3. Mehregan AH. Keratoacanthoma. In: Pinkus' guide to dermatohistopathology 4th edn. Connecticut: Appleton Century-Crofts, 1986; 458-459.
4. Keeney GL, Banks KM, Linscheid RL. Subungual keratoacanthoma. Report of a case and review of the literature. *Arch Dermatol* 1988; 124: 1074-1076.

Accepted July 23, 1996.

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