Case report

Keratoacanthoma: an unusual nasal mass

Cheratoacantoma: un'insolita neoformazione nasale

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SUMMARY

We report a case of keratoacanthoma in a non-sun-exposed nasal vestibule of an 84-year-old man. He presented with a progressively growing left nasal mass that had been present for 8 months. Examination showed a non-tender protruding mass arising from medial vestibular wall of the left nostril. Histopathology indicated it was a keratoacanthoma. In an elderly patient with a history of a progressively growing mass in the nose, a differential diagnosis of malignancy should be ruled out, and histological conformation is essential. To our knowledge, only a very small number of cases of nasal vestibular keratoacanthoma have been reported.

KEY WORDS: Keratoacanthoma • Nasal vestibule

RIASSUNTO

Descriviamo un caso di cheratoacantoma riscontrato a livello del vestibolo nasale in un uomo di 84 anni di età senza storia di esposizione solare. Il paziente presentava una neoformazione nel vestibolo nasale di sinistra comparsa da 8 mesi e progressivamente aumentata di volume. All'esame obiettivo si presentava come una massa esofitica non dolorante a base d'impianto a livello della parete mediale del vestibolo della narice di sinistra. L'esame istologico definitivo poneva diagnosi di cheratoacantoma. In un paziente anziano con storia di neoformazione nasale progressivamente aumentata di volume è necessario escludere la malignità della lesione. Per tale motivo l'esame istologico della lesione è indispensabile. Sulla base della nostra esperienza, sono stati descritti pochi casi di cheratoacantoma del vestibolo nasale.

PAROLE CHIAVE: *Cheratoacantoma • Vestibolo nasale*

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Introduction

Keratoacanthoma (KA) is a common benign epithelial tumour that originates from the pilosebaceous glands [1]. In most cases, it is characterized by rapid evolution, followed by spontaneous resolution over 4 to 6 months [1]. KA usually presents as a solitary flesh-coloured nodule with a central keratin plug on the sun-exposed skin of elderly individuals. The aetiology of this tumour is not completely understood; however, exposure to excessive sunlight is associated with its occurrence. Herein, we report a case of keratoacanthoma that occurred in a non-sun-exposed nasal vestibule of an 84-year-old man. The diagnosis of KA was established after excisional biopsy. To our knowledge, only a very small number of cases of nasal vestibular KA have been reported.

Case report

An 84-year-old Malays male presented to our Ear, Nose and Throat-Head and Neck clinic for a left nasal mass that had been present for 8 months. It was painless and progressively increasing in size. He had no other associated symptoms and reported no history of trauma to the nose or prolonged exposure to sunlight. On examination there was a firm, non-tender pedunculated mass arising from the medial vestibular wall of the left nasal vestibule (Fig. 1). Rigid nasoendoscopy revealed no other abnormalities. The patient had no palpable cervical lymphadenopathy. The remainder of his physical examination was unremarkable.

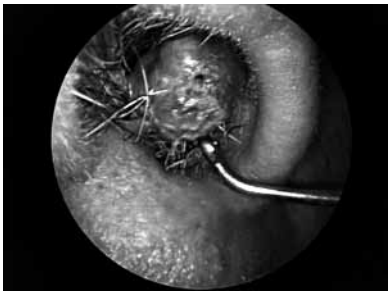

Fig. 1. Pre-operative view by nasoendoscopy.

The tumour was excised completely under local anaesthesia with minimal bleeding and the incision was closed using vicryl 5.0 sutures. Post-operative recovery was uneventful. The biopsy consisted of a mass of pale, greyish tissue with an irregular surface measuring 1 cm in diameter. Histologically, it showed solid proliferation of squamous epithelium comprising large mature squamous cells forming a central crater filled with parakeratotic keratin (Fig. 2). Keratin cysts were present within the squamous epithelium, which showed mild atypia. At the base and margins there were irregular epidermal proliferations with a partly solid and partly netlike appearance. The adjacent dermis showed a lymphohistiocytic infiltrate. A diagnosis of KA was made. No recurrence of disease was noted during a follow-up period of 10 months.

Discussion

KA is a common epithelial neoplasm that originates from pilosebaceous follicles and consists of keratinizing squamous cells that produce a flesh-coloured nodule with a central keratin plug. It is characterized by rapid evolution and spontaneous resolution with residual scarring in weeks to months [2]. Though KA was initially considered a benign growth, evidence indicates that it may progress to low grade squamous cell carcinoma. Therefore, it is now regarded as an immunologically well-controlled, low grade squamous cell carcinoma [3].

KA has been reported in all age groups, with a peak incidence in the 7th decade of life or beyond. It is rare in persons younger than 20 years of age. KA is uncommon in dark-skinned patients. Most cases occur on sun-exposed skin and rarely on the mucous membrane of the oral cavity. The face, neck, and dorsum of the upper extremities are common sites.

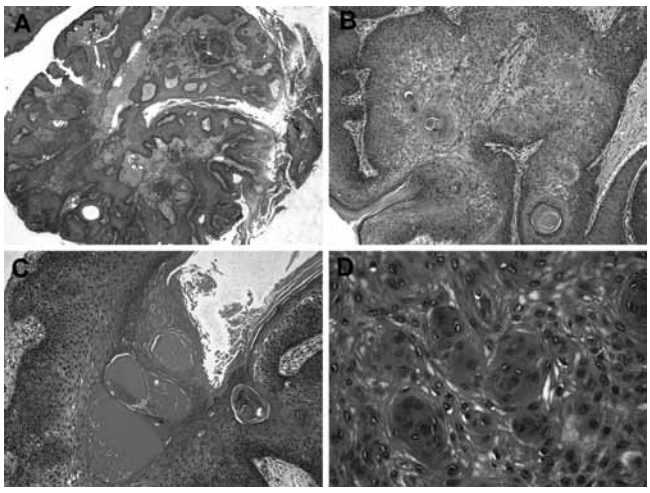

Fig. 2. Micrograph of the keratoacanthoma: (A) Low-power view of the lesion showing solid proliferations of squamous epithelium with intervening fibrovascular stroma. (B) Keratin cysts are present within the squamous epithelium. (C) Formation of a central crater filled with parakeratotic keratin. (D) High-power view of the squamous proliferation where cells show mild atypia.

Sun exposure has a key role in pathophysiology of KA [1], so the nasal vestibule is not a common location for the mass and our patient's medical history was negative for prolonged sun exposure. In persons with a genetic predisposition, sunlight may activate an oncogene or inactivate a suppressor gene. Other risk factors include tar exposure, immunosuppression, burns, oncogenic chemicals and psoriatic lesions previously treated with psoralen and ultraviolet A therapy, as well as other dermatoses [1 4]. In recent years, an increasing number of reports have described KA arising at sites of trauma [5]. A study by Miot et al. in 2006 suggested a strong association between cigarette smoking and KA [6]. Their regression is likely to be mediated by activated CD4+ cells and lymphocytes [2].

Rare variants of KA are seen in both solitary and multiple forms of the disease. The solitary forms include subungual, mucosal and giant KA, in addition to KA cemtrifugum marginatum. The multiple types include multiple self-healing KA of Ferguson Smith and multiple eruptive KA of Grzybowski.

Diagnosis is based on clinical history and physical examination, and is confirmed by skin biopsy and histological examination. Differential diagnosis includes squamous cell carcinoma and basal cell carcinoma; therefore, for a definitive pathological diagnosis, the biopsy must be fully representative of the lesion [7]. The margins of the KA have the most characteristic feature, which is elevation of the normal adjacent mucous membrane toward the core of the ulcer with a sudden change in the normal epithelium at the hyperplastic, acanthotic border [7]. With an incisional biopsy, the central part of the lesion is often sampled, and diagnosis may not be possible because the margin of the specimen, which is important in the differential diagnosis, is not included [7].

Various factors need to be considered in choosing the type of treatment. These include the site, size and number of lesions, recurrence, age and general condition of the patient, competence of the clinician with various therapeutic techniques, aesthetic considerations compatible with complete removal of the growth and patient compliance [8]. Although KA usually regresses spontaneously, surgical excision is the primary treatment nowadays. A full- thickness vertical excision with narrow margins is recommended [9]. Medical treatment is reserved for exceptional cases where surgical intervention is either not feasible or desirable. Medical intervention may be used for multiple lesions or lesions not amenable to surgery because of size and location. Systemic retinoids, intralesional methotrexate, 5-flourouracil, bleomycin and steroids have been used with success [10 11] Radiotherapy may be useful for tumour recurrences [12] in selected patients who are not good surgical candidates as surgery would result in cosmetic deformity. In the present case, we were able to excise the tumour completely.

Conclusion

KA, a benign epithelial tumour, rarely occurs in the nasal vestibule. Correct diagnosis is usually made by histological examination. In an elderly patient with a history of a progressively growing mass in the nose such as the present, malignancy should be ruled out.

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