

Verrucous squamous carcinoma of the nasal septum

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Abstract

We document only the second reported case of verrucous squamous carcinoma of the nasal septum. In both cases previous surgical treatment for assumed squamous papillomata had resulted in multiple recurrences necessitating formal surgical resection. Our patient has remained tumour-free during long-term follow-up.

Key words: Carcinoma, squamous; Nasal septum; Papilloma

Introduction

Verrucous squamous carcinoma is a rare type of squamous carcinoma characterized by its florid appearance, low grade locally invasive activity yet 'benign' histological appearance. It is possibly of viral aetiology. Whilst nasal septal carcinoma is uncommon, verrucous squamous carcinoma of the septum is distinguished by its rarity.

This paper documents the management of verrucous squamous carcinoma of the nasal septum, and reviews the pitfalls in diagnosis and therapy.

Case report

A 70-year-old man presented with a papillomatous lesion on the nasal septum. The past medical history included excision of the lesion on two occasions, three and a half and two years previously, with histological diagnosis of squamous papilloma. Clinically, there was an 8 mm sessile, broad-based, exophytic lesion involving the anterior septal mucosa of right nasal fossa. There was no lymphadenopathy. The history of recurrence together with the aggressive clinical appearance were not in keeping with the benign histological features.

Total excision was performed via a lateral alar release (through and through incision in the nasolabial crease from the anterior nares to the bony margin of the pyriform aperture) approach. The tumour resection incorporated a 4 mm tumour-free mucosal margin, including underlying perichondrium, and septal cartilage. The defect was repaired with a split skin graft on the exposed contralateral perichondrium, supported by sutures and silastic splints. Post-operative recovery was uneventful and after four years there has been no evidence of recurrence. Review of the histology reaffirmed the appearance of a hyper-keratotic lesion, lacking stigmata of frank malignancy.

Discussion

Whilst nasal and paranasal malignancies are uncommon (accounting for three per cent of that in the head and neck region), carcinomata involving the nasal septum is so rare as to preclude the apportioning of statistical prevalence and inclusion in the TNM classification. A single case of verrucous squamous carcinoma of the nasal septum has

previously been documented (Hanna and Ali, 1987), although cases involving columellar skin have been reported (Elliott *et al.*, 1973). Since the initial description of verrucous squamous carcinoma in the oral cavity (Ackerman, 1948), it has been recognized throughout the head and neck region, (nasal fossa, maxillary sinus, nasopharynx, larynx, oesophagus, external auditory meatus and base of skull) and may also occur on the scrotum, penis, perineum, vulva, cervix and plantar skin. These are also common sites of distribution of squamous papilloma, which may be of epidemiological relevance. Current interest is focused on human papilloma virus type 16 and its aetiological role in these lesions (Brandsma *et al.*, 1986).

Clinically, verrucous carcinoma presents as an exophytic, broad-based tumour which is locally invasive but generally non-metastatic. Its florid microscopic appearance is at odds with its benign histological features, necessitating co-operative assessment between surgeon and pathologist.

Histologically the cytological criteria of malignancy are lacking in a superficial incisional biopsy and an excisional biopsy providing an intact specimen is required for adequate assessment of histological architecture of the lesion. In this case, demonstrating the classically described histological features, the tumour consists of a highly-differentiated, thick keratinised layer compressed in invaginating folds with club-like 'pushing' non-infiltrating margins. The basement membrane is intact and mitosis is generally absent (Figures 1 and 2).

Cytologically the squamous cells lack the usual criteria of malignancy, as is common with verrucous squamous carcinoma. Because of this, the histological diagnosis is frequently missed in superficial biopsies.

Cooper *et al.* (1992) described morphometric analysis of the Malpighian layer of cells in the differentiation of verrucous squamous carcinomata from squamous papilloma. They found that in verrucous carcinomata the cellular and nuclear area was larger than in squamous papilloma, and the cells in verrucous carcinomata had a lower nuclear/cytoplasmic ratio.

The four treatment modalities, surgery, radiotherapy, chemotherapy and immunotherapy, have all been used in verrucous squamous carcinoma tumour management, but surgery forms the mainstay of treatment, particularly in laryngeal lesions following claims of radiotherapy promot-

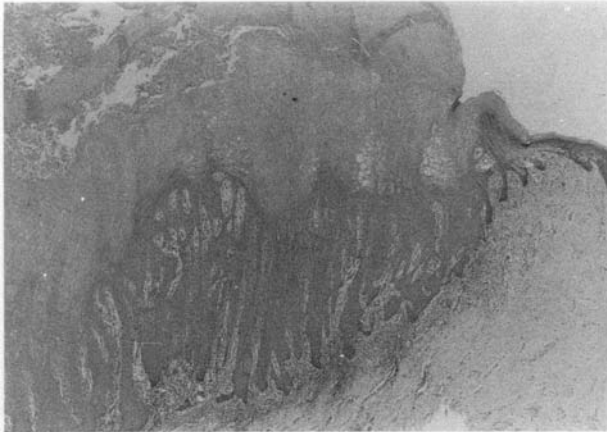


FIG. 1

Squamous lesion with polypoid configuration, with clear evidence of deep invasion of lamina propria indicative of malignancy (H & E; $\times 40$).

ing anaplastic carcinoma development, possibly due to activation of viral DNA sequences. However, McDonald *et al.* (1982) reviewed cases of anaplastic transformation and concluded that there were only four adequately documented cases and, amongst others, Vidya Sagar *et al.* (1992) in a large study of 107 cases, found no evidence suggesting anaplastic transformation. The centre which initially described post-radiotherapy anaplastic transformation has latterly refuted this entity, (O'Sullivan *et al.*, 1995). The role of chemotherapy and immunotherapy have not been substantiated by a numerically significant series.

Surgical management proved appropriate both in our case of septal verrucous carcinoma and that of Hannah and Ali (1987). Both cases have confirmed that superficial excision of verrucous squamous carcinoma is inadequate and will risk tumour recurrence due to involvement of deeper tissue planes. Surgical resection must thus include 2–4 mm of normal mucosal margin with incontinuity excision of underlying perichondrium and cartilage. Provided there is no direct involvement of cartilage, total resection of the septum is probably unnecessary and the contralateral perichondrium can then be grafted (as in this case).

Conclusion

The rarity of verrucous squamous carcinoma of the nasal septum precludes a dogmatic management protocol, however, tumour resection with underlying cartilage and primary skin grafting has proved effective in this case. The difficulty with histological differentiation from squamous papilloma should dictate a policy of excision biopsy of septal papillary lesions and perhaps a more protracted follow-up period.

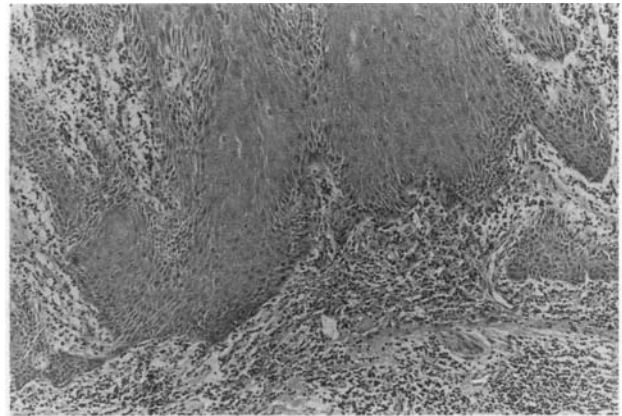


FIG. 2

The deep portion of the lesion shows broad bulbous masses of squamous cells pressing into the lamina propria, with an underlying lymphocytic response; basal layer of infiltrating epithelium beginning to break up indicative of malignancy. (H & E; $\times 250$).

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