

Hybrid Verrucous Squamous Cell Carcinoma of Sinonasal Tract : A Case Report

Verrucous carcinoma is a variant of squamous cell carcinoma and should be distinguished from benign papilloma and well-differentiated nonverrucous squamous cell carcinoma. It is rare tumor of the sinonasal tract. Occasionally, conventional squamous cell carcinomatous components may be seen in verrucous carcinoma. This entity is called a hybrid verrucous squamous cell carcinoma. We report a case of hybrid verrucous squamous cell carcinoma occurring in the nasal cavity and paranasal sinus of a 67-year-old male. The removed mass shows the typical feature of verrucous carcinoma, but focally conventional squamous cell carcinomatous area is also noted. The treatment of this case follows verrucous carcinoma, but close follow up is mandatory because it may potentially spread to regional lymph nodes in contrast to pure form of verrucous carcinoma.

Key Words: Carcinoma, verrucous; Nasal cavity; Maxillary sinus

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INTRODUCTION

Verrucous carcinoma is a rare entity in the sinonasal tract (1). It is important to differentiate this tumor histologically and clinically from benign papilloma and well-differentiated nonverrucous squamous cell carcinoma. The difference between verrucous carcinoma and nonverrucous squamous cell carcinoma is the presence or absence of cytologic atypia. Therefore, malignant squamous epithelial tumor with the feature of definite cytologic atypia should be diagnosed as conventional squamous cell carcinoma (2). However, a focus of conventional squamous cell carcinoma may be seen in verrucous carcinoma (3), known as a hybrid verrucous squamous cell carcinoma (4). We report a case of hybrid verrucous squamous cell carcinoma of the sinonasal tract, which shows mainly verrucous carcinomatous features with focal area corresponding to conventional squamous cell carcinoma. This type of tumor should be differentiated from conventional squamous cell carcinoma, because it exhibits a relatively indolent course like verrucous carcinoma. However, it may potentially spread to regional lymph nodes in contrast to pure form of verrucous carcinoma (4).

CASE REPORT

A 67-year-old male patient was admitted to our hos-

pital due to right nasal obstruction for 3 months. He complained of purulent rhinorrhea, post nasal drip and sneezing. Medical history was unremarkable. He was a non-smoker and recently stopped drinking alcohol. Physical examination revealed polypoid change with pus in the right nasal cavity. Paranasal sinus and nasal cavity MRI revealed soft tissue mass located in the right nasal cavity and maxillary sinus. This mass was associated with bony destruction of anterior and medial walls of maxillary sinus and possibly involved right ethmoid and sphenoid sinuses. Biopsied nasal mucosa showed separate fragment of hyperkeratotic mature squamous epithelium. Under the clinical impression of malignancy, wide resection of mass, right partial maxillectomy, right anterior ethmoidectomy and right partial middle and inferior turbinate resection were done. On operation, the nasal cavity and middle meatus were filled with a lobulated, whitish hard mass, which was attached to middle turbinate, inferior turbinate and maxillary sinus. Multiple fragments of apparently benign hyperkeratotic squamous epithelia with papillary formation, the features of so-called verrucous hyperplasia, were mixed with normal nasal mucosal tissue (Fig. 1). Separate fragments of thick-walled keratins were frequently found (Fig. 2). Basal layers of these epithelia show blunted-ended appearance, a characteristic feature of verrucous carcinoma (Fig. 3). The tumor cells were generally uniform, but only one area revealed tumor cells showing marked cytologic atypia, compatible with

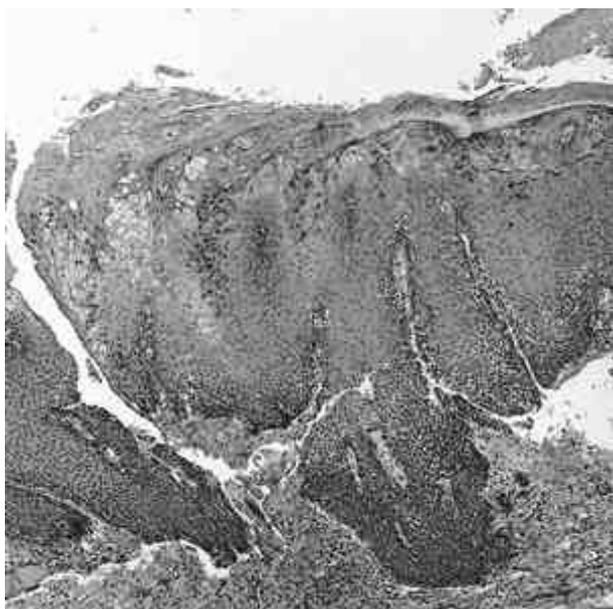


Fig. 1. Multiple fragments of apparently benign squamous epithelia showing the features of so-called verrucous hyperplasia are found (H&E, $\times 40$).

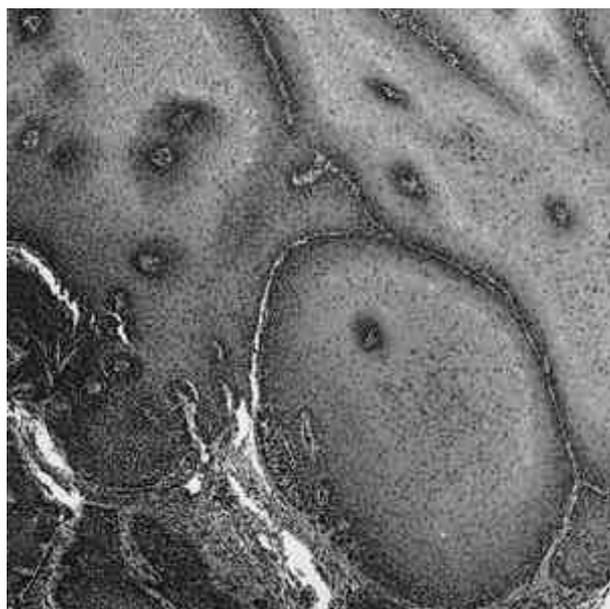


Fig. 3. Basal layers of hyperplastic squamous epithelia show blunted-ended appearance, characteristic of verrucous carcinoma. The cell components are generally uniform (H&E, $\times 40$).

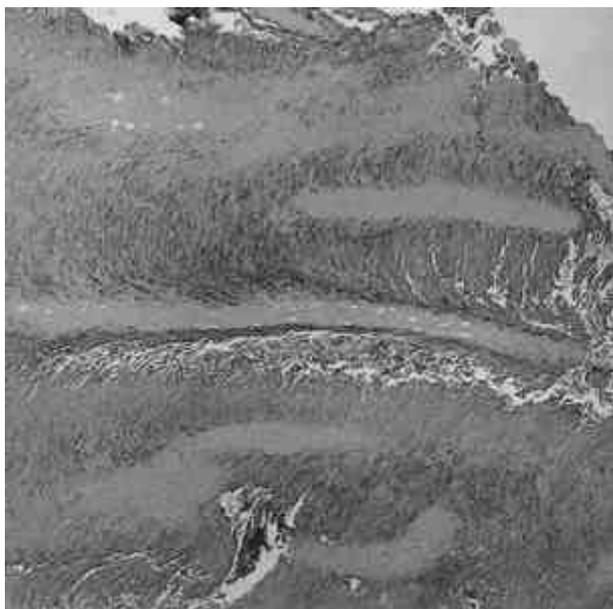


Fig. 2. Separate fragments of thick-walled keratins are frequently noted (H&E, $\times 100$).

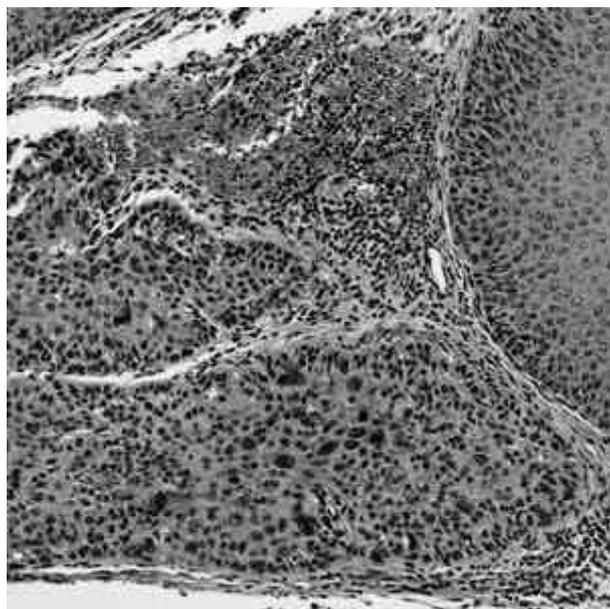


Fig. 4. One area reveals marked cytologic atypia, compatible with conventional squamous cell carcinoma (H&E, $\times 200$).

conventional squamous cell carcinoma (Fig. 4). The remaining flat mucosa showed atypical change focally. This tumor was diagnosed as verrucous carcinoma with focal area of conventional noninvasive squamous cell carcinoma, a hybrid verrucous squamous cell carcinoma.

DISCUSSION

Verrucous carcinoma is a highly differentiated variant of squamous cell carcinoma (3), which has cytologic and architectural features similar to that of a reactive process

and not to that of invasive carcinoma. However, it has the ability to invade normal tissues to a limited extent, demonstrating its aggressiveness (2). The gross appearance is usually a warty, gray-white lesion with filiform projections. The characteristic histologic features are highly keratinizing surface, papillary areas and apparent absence of dysplastic change in the squamous epithelium (3). Regional lymph node metastasis and distant metastasis are extremely rare (5). It is generally agreed that surgery in resectable lesions offers the best prospect for long-term survival. This is based on the observations that verrucous carcinoma may be insensitive to radiotherapy and the radiotherapy may alter the nature of the tumor to an anaplastic carcinoma (5).

The most frequent site is the glottic region of the larynx in the head and neck areas, but may develop in another mucosal surface of the ear, nose or throat (3). The sinonasal tract is very rare site (1). Verrucous carcinoma should be differentiate from benign papilloma and well-differentiated nonverrucous squamous cell carcinoma with relatively mature keratinized cells on the surface.

Schneiderian papillomas are almost always devoid of surface keratosis. Keratinization of these papillomas has to be regarded as an atypical histologic finding. The schneiderian papillomas in which keratosis was found show quick recurrence, and in each, an eventual verrucous hyperplasia with coexisting or subsequent verrucous carcinoma or invasive squamous cell carcinoma of various degrees of differentiation (6). Therefore, it is important that hyperkeratotic or verrucous lesions in the sinonasal tract and larynx were regarded as potentially malignant and thorough sampling was essential.

Differentiation from well-differentiated nonverrucous squamous cell carcinoma has significant clinical implication. Radiation is still regarded as inappropriate for the treatment of verrucous carcinoma due to both its ineffectiveness and the risk of inducing progressive anaplasia, whereas radiotherapy is the first modality used in the treatment of nonverrucous carcinoma. The point of difference is the presence of a more anaplastic non-keratinizing base in nonverrucous carcinoma. Diagnosis of verrucous

carcinoma should be confined for invasive tumors with squamous differentiation that lack the cytologic features of conventional squamous cell carcinoma (2). According to this view, our case was diagnosed as nonverrucous squamous cell carcinoma. However, precise diagnostic criteria, particularly the minimum amounts of the two phenotypic components required, have not been defined.

It is described that a focus of conventional squamous cell carcinoma can be seen in verrucous carcinoma (3). These tumors are described as a hybrid verrucous squamous cell carcinoma and follow a relatively indolent course, but may potentially spread to the regional lymph nodes (4). Therefore, the treatment of choice of hybrid verrucous squamous cell carcinomas is local excision like that for the verrucous carcinomas, without neck dissection unless these regions are clinically suspicious (4). Therefore, we diagnosed this tumor as hybrid verrucous squamous cell carcinoma and the most appropriate treatment in this patient is not radiotherapy but surgical resection and clinical follow up will be essential because of the possibility of nodal metastases.

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