Primary mucoepidermoid carcinoma of maxillary sinus- a rare case report

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Citation

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Abstract

Primary mucoepidemoid carcinoma of the maxillary sinus is extremely rare. We report one such rare occurence in a 60year old male who presented with swelling in the left cheek. CT scan showed a infiltrative tumor mass in the left maxillary sinus. Histopathological examination revealed a high grade mucoepidermoid carcinoma.

INTRODUCTION

Primary intraosseous mucoepidermoid carcinoma (PIOC) of the maxillary sinus extremely rare malignant salivary gland tumour. It is commonly seen in the posterior part of the mandible; its occurrence in the maxilla is rare1,2.We herin report one such rare occurrence in 60 year old male and also discuss the histogenesis of these tumors in the maxillary sinus

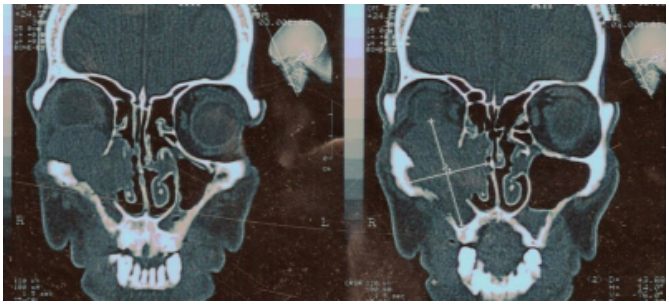
CASE REPORT

A 60 years old male presented with a swelling below left eye for 3 months. On examination there was a swelling of 3cmx3cm size below left eye. The swelling was hard, non tender, non mobile and was obliterating the inferior orbital margins .CT Scan showed a mass in the left maxillary antrum with

erosion and destruction of medial wall, inferior wall as well as posterolateral wall of maxillary sinus. There was erosion and destruction of anteroinferior ethmoid air cells. The Inferior orbital wall was also destroyed and inferior rectus muscle was involved(Fig1) The growth was clinically diagnosed as squamous cell carcinoma. The biopsy was done.

Figure 1

Figure 1:CT Scan showing an infiltrating tumor in the maxillary sinus



GROSS FINDINGS

We received multiple grey white to grey brown soft tissue pieces along with bony pieces altogether measuring 8cmx8cmx8cm. one of the bone piece showed attached 3cmx2cm grey white growth. Cut section of the growth was grey white in colour

MICROSCOPIC FINDINGS

Microscopic examination showed tumor cells arranged in solid sheets, cords, nests, glands, cystic spaces and microglandular cribriform pattern diffusely infiltrating the fibrous stroma.The tumor cells comprise of sqamous cells, mucinous cells and hybrid cells..Focal areas of necrosis were also seen.PAS staining clearly delineated the mucin secreting cells

Figure 2

Figure 2:Photomicrograph showing nests of malignant squamous cells(H&E,20x)

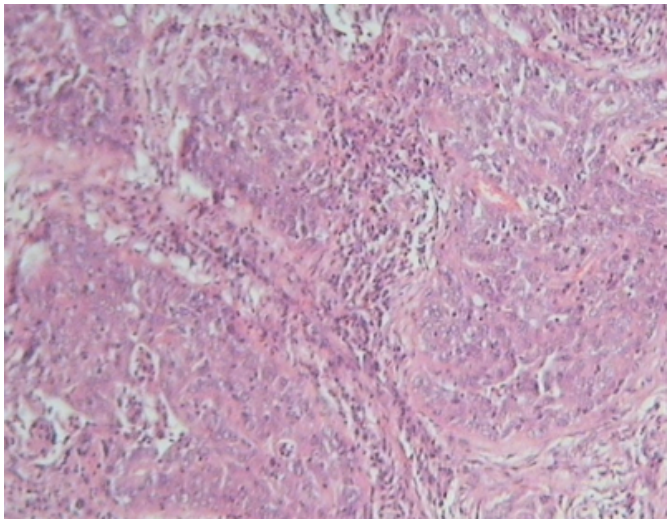


Figure 3

Figure 3: Photomicrograph showing nests of mucin secreting cells(H&E,20x)

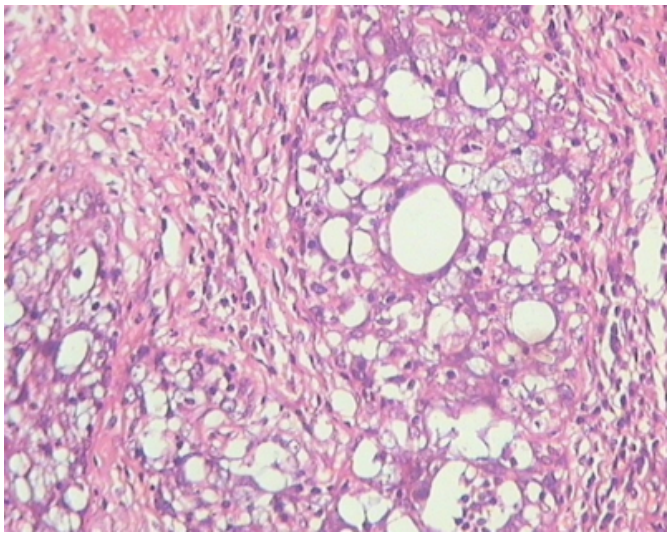
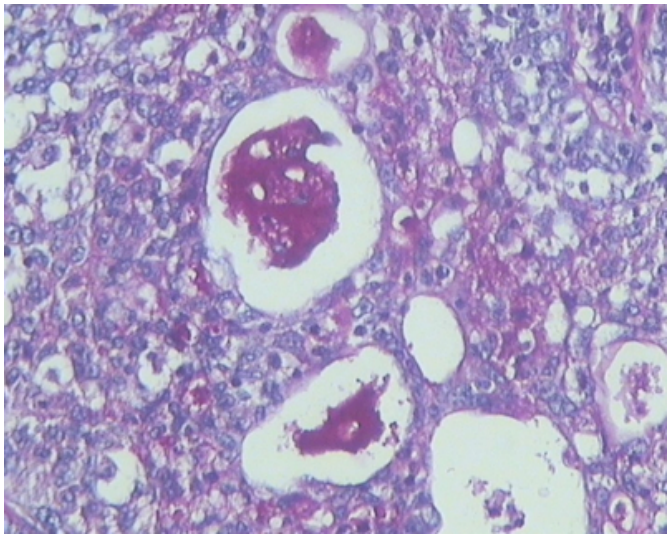


Figure 4

Figure 4:Photomicrograph showing PAS positive secretions in the tumor cells and glandular lumen(PAS ,20x)



DISCUSSION

Mucoepidermoid carcinoma occurs most often in the major salivary glands, the minor salivary glands of the oral cavity and pharynx and the lacrimal glands. Only rarely does it arise in the respiratory tract (i.e., the larynx, trachea, and bronchi or the sinonasal cavities. [3] According to combined reports of four large series of major and minor salivary gland tumors, sinonasal mucoepidermoid carcinoma accounts for 0.6% of all salivary tumors and 4.8% of all mucoepidermoid carcinomas.[4]

When these tumors do occur in the sinonasal tract, the most common site is the maxillary antrum; other sites, in order of decreasing incidence, include the nasal cavity, nasopharynx, and ethmoid sinuses. This pattern most likely reflects the relative distribution of minor salivary glands in this area of the upper aerodigestive tract.

Sinonasal tract adenomatous tumors have been presumed to arise from submucosal mucoserous glands or represent intraosseous extension of minor salivary gland tumours of the sinus mucosa[5].However, a study of the mucosal origin of 107 sinonasal tract adenomatous tumors by Gnepp and Heffner found that most (including 83% of mucoepidermoid carcinomas) originated in the surface mucosa. [6] The mucoepidermoid carcinomas in their series were frequently accompanied by abnormal (dysplastic) surface mucosa adjacent to the tumor. These findings suggest that mucoepidermoid carcinoma of the sinonasal tract, like squamous cell carcinoma, can be preceded by mucosal dysplasia or carcinoma in situ.

Central mucoepidermoid carcinoma affects females twice more frequently than males and involves the mandible twice more often than the maxilla[7]. Symptoms and physical findings in patients with mucoepidermoid carcinoma of the sinonasal tract can include nasal obstruction, epistaxis, facial pain, diplopia. and/or a subcutaneous mass if the tumor has eroded bone and invaded the subcutis. Imaging studies, including CT, should be part of the early clinical management to determine if a neoplasm is present. When a mass is identified, MRI is essential for assessing possible intracranial extension.

One of the largest such series (367 patients), reported by Spiro et al[8] included 18 cases of mucoepidermoid carcinoma of the sinonasal tract. Spiro et al reported that the overall 10-year determinate cure rate for mucoepidermoid carcinoma in all head and neck sites was 90% for low-grade tumors and 42% for high-grade tumors. In addition to high tumor grade, other predictive factors that have been associated with poor 5-year survival include bone invasion, age beyond 60 years, pain, positive cervical nodes and facial palsy. In a series of 60 patients with mucoepidermoid carcinoma of the head and neck, Healey et al described five patients who had high-grade mucoepidermoid carcinoma of the maxillary antrum; four of the five died of local disease despite radical surgery and radiotherapy.[9]

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