Case Report

Non keratinizing squamous cell carcinoma of nasal cavity - A rare case of confusing nomenclature

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Abstract
Malignant sinonasal carcinomas constitute <1% of all cancers with annual incidence of 3.5 per ten thousand population and of these, 15-20% are non-keratinizing with a male preponderance. We report a case of 56 year male with history of nasal obstruction and discharge. CECT showed large, expansile mass predominantly in left nasal cavity with destruction of adjacent sinuses. A biopsy was taken which revealed Non-keratinizing carcinoma (transitional type). Rarity of this case and multiple confusing nomenclatures prompted us to report this case.

Keywords: Non keratinizing carcinoma, transitional cell cancer, sinonasal cancer.

Introduction
Non keratinizing carcinoma of nasal cavity is a rare malignancy with incidence of 3.5/100,000 population per year.[1] According to WHO classification, it has various synonyms like schneiderian cancer, cylindrical cell carcinoma, Ringertz carcinoma and respiratory epithelial carcinoma.[2]

Case Report
A 56 year old male working in furniture industry in eastern U.P. presented to our hospital with chief complaints of bilateral nasal obstruction and discharge for 1 year along with swelling and pain since a week. On local physical examination, a polypoid mass was present in left nasal cavity with deviated nasal septum to right. The mass was insensitive and bled to touch. CECT-PNS showed a large, expansile hyperdense lesion in nasal cavity, predominantly expanding to left side with destruction of adjacent bones of ethmoidal and sphenoidal sinus and also medial wall of maxillary sinus laterally and posterolaterally. Wall of left maxillary sinus and dilation of osteomeatal complex was noted. Median nasal septum was deviated to left. (Figure1,2) Differential diagnosis was made as sinonasal polyp and neoplastic etiology. Histopathological examination showed tumor cells arranged in ribbon like and cord like growth pattern with pleomorphic cells having high
nucleocytoplasmic ratio and hyperchromatic nuclei. The cells were predominantly spindle shaped and showed cells arranged perpendicular to basement membrane. Tumor showed pushing margin with stromal infiltration. (Figure 3, 4)

Figure 1 and 2- CECT-PNS showing a large, expansile hyperdense lesion in nasal cavity, predominantly expanding to left side with destruction of adjacent bones of ethmoidal and sphenoidal sinus and also medial wall of maxillary sinus laterally and posterolaterally. Wall of left maxillary sinus with dilation of osteomeatal complex. Median nasal septum is deviated to left

**Discussion**

Non keratinizing carcinoma of sinonasal cavity is a rare malignancy of nose and paranasal sinuses. It has many synonyms according to WHO classification including transitional cell carcinoma, schneiderian cancer, cylindrical cell carcinoma, Ringertz carcinoma and respiratory
epithelial carcinoma.\[2\] This could be the reason for very few reported cases of these tumors in Indian literature.

Grossly these tumors grow as exophytic masses with corrugated to smooth surface. Most common sites are maxillary and ethmoid sinuses.\[3,4\] Microscopic examination of these tumors show cylindrical tumor cells with a tendency to form palisade arrangements perpendicular to basement membrane. The WHO classification lists it as a variant of squamous cell carcinoma. It is described as tumor of sinonasal tract characterised by a plexiform growth pattern with occasional mucus containing cells.\[5\]

Osborn called inverted papillomas as transitional papilloma and sinonasal non keratinizing carcinoma as transitional carcinoma.\[3\] These two are differentiated on the basis of keratin pearls, high mitotic rate and nuclear pleomorphism.\[6\] A recent study has shown that non keratinizing carcinomas of sinonasal tract have higher prevalence of high risk HPV DNA than other types.\[7\]

Treatment of sinonasal carcinoma depends upon their stage, patient performance status, comorbidities and tumor types. However, surgical resection with postoperative radiotherapy appears to be optimal approach.\[8\] Palliative chemotherapy can be used effectively for incurable tumors.\[8\]

**Conclusion**

This case is reported for its rarity and to increase the reported cases in literature. Caution should be taken while diagnosing a nasal polyp in an elderly with occupational exposure to wood, nickel and leather dust. Histopathological diagnosis is confirmatory.

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**References**