



Case Report

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

Authors

Kishore Vatsala, M.D.¹, Singh Neeraj Kumar, M.D.^{2*}, Kotasthane Dhananjay S, M.D.³

¹Assistant Professor, Department of Pathology, Heritage Institute of Medical, Sciences, Varanasi-221311

²Assistant Professor, Department of Pathology, Heritage Institute of Medical, Sciences, Varanasi-221311

³Professor and Head of Department, Department of Pathology, Heritage Institute of Medical, Sciences, Varanasi-221311

*Corresponding Author

Dr Neeraj Kumar Singh

Assistant Professor, Department of Pathology, Heritage Institute of Medical Sciences, NH2 bypass, bhadwar Varanasi, U.P.- 221311, India

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. (Figure3,4)

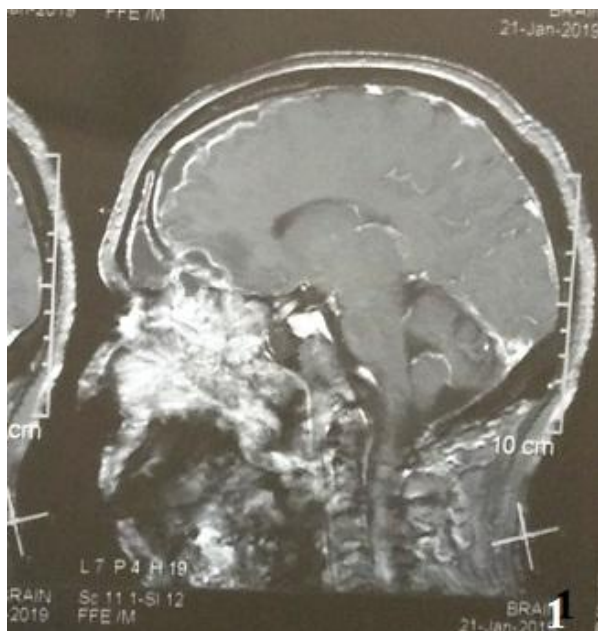


Figure 1 and 2- CECT-PNS showing a large, expansile hyperdense lesion in nasal cavity, predominantly expanding to left side with destruction of adjacent bones of ethmoidal and sphenoidal sinus and also medial wall of maxillary sinus laterally and posterolaterally. Wall of left maxillary sinus with dilation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

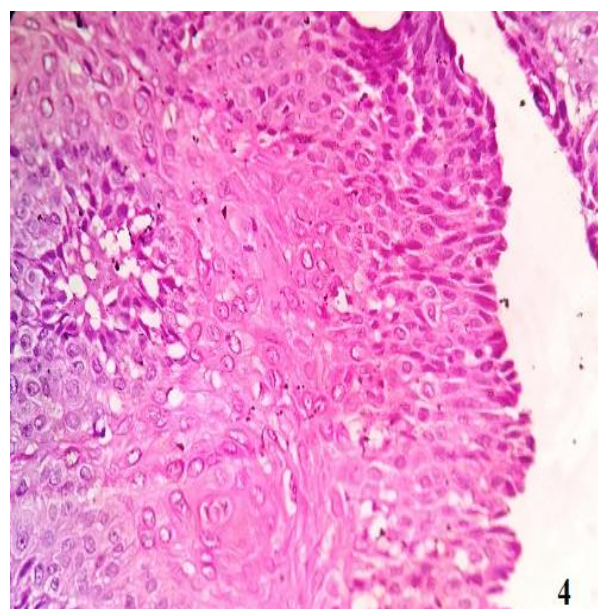
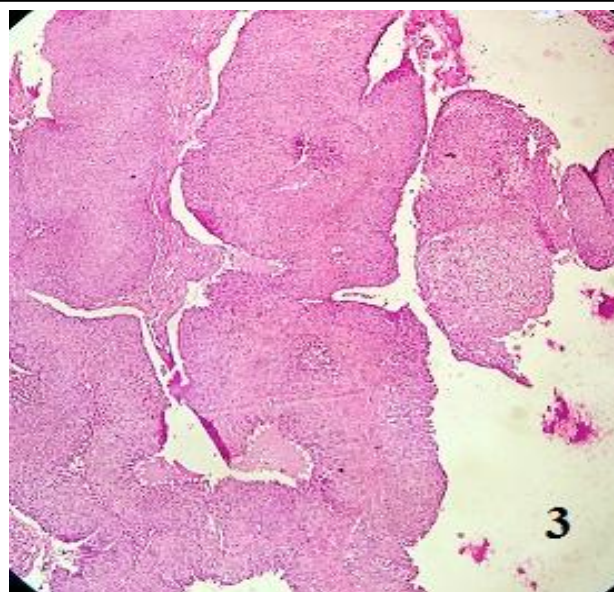


Figure 3 and 4- Low power and high power view of tumor cells arranged in ribbon like and cord like growth pattern with pleomorphic cells having high nucleocytoplasmic ratio and hyperchromatic nuclei. The cells were predominantly spindle shaped and showed cells arranged perpendicular to basement membrane. Tumor showed pushing margin with stromal infiltration

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.

Source(s) of support: Nil

Presentation at a meeting: No

Conflicts of interest: Nil

Acknowledgement : None

References

1. Jhawar Kavish, Jain A. K., Nigam Ritu, Sachan Manish Kumar, Freni J. K. Transitional Cell Carcinoma of Nasal Cavity: A Rare Case Report. *Journal of Evolution of Medical and Dental Sciences* 2014;3(30): 8399-8402
2. Gupta Kanupriya, Gupta Jatin. Non keratinizing squamous cell carcinoma – a diagnosis of confusing nomenclature. *European journal of pharmaceutical and medical research* 2017;4(6):717-718
3. Osborn DA. Nature and behaviour of transitional tumors of the upper respiratory tract. *Cancer* 1970;25(1):50-60.
4. Osborn DA. Transitional cell growths of the upper respiratory tract. *J Laryngol Otol* 1956; 70: 574–587.
5. Pilch BZ, Bouquot J, Thompson LDR. Squamous cell carcinoma. In: Barnes L, Eveson JW, Reichart P, Sidransky D, editors. *World Health Organization classification of tumors. Pathology and genetics of head and neck tumors*. Lyon: IARC Press; 2005:15-7.
6. Zarbo RJ, Torres FX, Gomez J. Nasal cavity and paranasal sinuses: embryology, anatomy, histology and pathology. In: Pilch BZ, editor. *Head and Neck Surgical Pathology*. Philadelphia: Lippincott Williams & Wilkins ; 2000:80-156.
7. Rashid Nur Hashima Abdul, Pauzi Hayati Suria Md, Tan GoekChin ,Husain Salina, Yunus Mohd Razi Mohammad, Gendeh Balwant S. Non keratinizing Carcinoma of the Sinonasal Tract: A Diagnosis of Confusing Nomenclature. *Philipp J Otolaryngol Head Neck Surg* 2011; 26 (2):21-24
8. James S. Lewis Jr. Sinonasal Squamous Cell Carcinoma: A Review with Emphasis on Emerging Histologic Subtypes and the Role of Human Papillomavirus. *Head and Neck Pathol* 2016;10:60–67.