TRANSITIONAL CELL CARCINOMA OF THE NASAL CAVITY


ABSTRACT:

A 40 years old female presented with left nasal obstruction, sneezing and watery discharge for the last three months. Clinically left proptosis and widening of the nasal bridge was obvious while the left nasal cavity was full of multiple greyish grape like polypoidal masses which were painless and did not bleed on manipulation. CT scan revealed soft tissue mass occupying the left nasal cavity, maxilla, infra temporal fossa, ethmoid, sphenoid and the orbit. The mass was excised in toto through left Lateral Rhinotomy approach and histology examination revealed it to be a transitional cell carcinoma.

KEY WORDS: Nasal Obstruction, Proptosis, Histopathology.

INTRODUCTION:

Transitional cell carcinoma of the nose and para nasal sinuses in an uncommon tumor of the head & neck region. Sino-nasal tumors are rare lesions with male predominance during 5th & 6th decade, while inverted papillomas & squamous cell carcinoma are common among them but transitional cell carcinoma is only 3 to 6% of all 2. Transitional cell papilloma is 1 - 4% of all nasal neoplasm with male female ratio is 5:1 between 50 to 60 years of age, quite uncommon in blacks & extremely rare in children 3. Histologically the show pattern of inversion covered with squamous or transitional epithelium with intact basement membrane. Transitional cell papilloma is primarily a benign epithelial neoplasm with a propensity to transform into carcinoma. The characteristic attributes of transitional cell papilloma are its tendency to recur & propensity to be associated with malignancy 4, those papillomas presented with malignant cells called synchronous lesions are 9.5 to 15% while some of them recur after excision as a malignant mass called metachronous lesions, account for only 1 to 2% 5. The histopathological parameters of recurrence & malignant transformations of sino-nasal transitional cell papilloma may be useful in predicting the clinical course of the tumour, i.e hyperkeratosis, squamous cell hyperplasia, high mitotic index. Thus their malignant transformation is related to the presence of the bone destruction, absence of inflammatory polyp, hyperkeratosis, squamous epithelial hyperplasia, increased mitotic index and decrease eosinophil count 6. The evidence of HPV (human papilloma virus) as a potential etiological agent in sino-nasal cancer is derived from two major research reports i.e. malignant transformation of benign transitional cell papillomas and detection of HPV DNA in sino-nasal carcinomas 7,8. Thus transitional cell carcinoma has similarity with transitional cell papilloma as benign behaviour and malignant options, while surgery is the main modality of treatment 9. Neither the etiology nor the factors responsible for malignant transformation are known to date 10.

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CASE REPORT:

A 40 years old female presented with history of progressive left nasal obstruction, sneezing and watery nasal discharge of three months duration. Earlier she had noticed nasal blockage on the left side, which is increased gradually in duration and severity till the nostril was completely blocked. It was associated with sneezing and watery discharge. She had no history of fever, facial pain and epistaxis. A detail history & through ear, nose, throat and head and neck examination was done in otolaryngology department of Baqai medical University. Clinically she had widening of the nasal bridge & left proptosis, while greyish grape like masses completely filling the left nasal cavity were painless & did not bleed on manipulation. The septum was deviated to the right with adequate patency on the rt. & completely compromised on the left. Relevant examination of E.N.T, neck and cranial nerves were unremarkable, while general physical & systemic examination and lab. Investigations revealed no abnormality. For diagnosis she had an intranasal
biopsy in an other public sector hospital but she had no record of it. C. T scan of the nose & para-nasal sinuses with contrast showed a soft tissue mass of 6 x 5.5 cm in axial and 4 cm in cranio-caudal extension occupying the left nasal cavity, maxilla, infratemporal fossa, ethmoid, sphenoid, frontal sinuses and the left orbit (Fig. 1&2). Deviation of the nasal septum was on the right side while no sign of intra cranial extension in noticed.

Surgical excision of the mass was done under general anesthesia through left lateral rhinotomy approach. The masstowas excised in to, would closed in layers with vicryl deep & proline in the skin (fig. 3,4,5).

Nose was packed with BIPP soaked ribbon gauze and removed on 3rd post-operative day. Patient recovered with out any untoward complications. Specimen sent for histological examination proved to be a transitional cell carcinoma.

DISCUSSION:

The mucosal lining of the nose & para nasal sinuses is made up of pseudostratified columnar epithelium with prominent secretory component also called Schneiderian membrane and is derived from both the neuroectoderm of the olfactory plaeode & from the nasopharyngeal mucosa of endodermal orignon 11. Such a divergent origin probably explains the very different histological appearance of benign papillomas at this site 12,13 14. The retrospective studies reported between 1972 & 1992 based on 1325 cases, proved that men are more commonly affected than woman with a ratio of 5:1 15, the mean age was 53 years but it can also occur in children 16. Tendency to recur even after radical excision & a potentially substantial chance for malignant transformation are the two characteristic features of transitional cell papilloma 17,18. Considerable malignant potential of sino-nasal papilloma were extensively documented in numerous reports during several decades 19,20. Clinically sino-nasal papilloma presented as bulky, large, deep red or grey coloured mass with prominent vascularity which can affect the mucosa of the nose & sinuses like maxilla, sphenoid, Frontal and ethmoid sinuses 21. After a series of studies it is reported that sino-nasal lesions analysed for HPV suggested that benign transitional cell papillomas are preferentially associated with the low risk HPV types 6 and 11, where as their malignant counterparts are exclusively positive for HPV 16 DNA 22. In early 1998 this had resulted out of 41 studies that HPV DNA was analysed in benign & malignant sino-nasal tumours 23. In addition, the expression of the HPV transforming oncogenes E6 & E7 was recently demonstrated in sino-nasal transitional cell papillomas 24. These dates strongly implicate HPVs as etiological factors in a substantial proportion of sino-nasal papillomas 25. The pre-cancerous lesions of transitional cell papilloma exhibited elevated levels of EGFR (epidermal growth factor receptor) and TGF-alpha (transforming growth factor-alpha) and these expression may be associated with early events in papilloma carcinogenesis 27. In late 2002 more than 1041 cases of transitional cell papillomas have been analysed for HPV and 347 cases (33.3%) have been found positive, whereas 322 sino-nasal carcinomas have also been analysed and 70 cases (21.7%) have been found positive 28. A report of cases of invasive carcinomas arising in Schneiderian papillomas, the first a poorly differentiated non keratinizing squamous cell carcinoma and the second a papillary transitional cell carcinoma 29. Another study of 72 cases of sino-nasal papillomas, of which 8 cases of papillomas under went malignant transformation 30. A series of 83 sino-nasal transitional cell papillomas, 7 developed either synchronous or metachronous malignancies 31. Despite the benign nature, sino-nasal transitional cell papillomas have a small but definite potential for malignant formation. Virtually all serious complications of sino-nasal papillomas, including local invasion, copresentation with carcinoma and development of a subsequent malignancy, have been associated with the transitional cell papilloma 32.
Wide surgical excision and through sampling for histology of the benign lesion is required to avoid missing the synchronous malignancies.

REFERENCES:


