Primary Intestinal-type Adenocarcinoma of the Nasal Cavity A Case Report

S Belli¹, U Taskin¹, A Caglar², US Tetikkurt²

ABSTRACT

We report a rare case of sinonasal intestinal-type adenocarcinoma in the nasal cavity. A 31-year old man presented with headache and epistaxis. We identified a malignant tumour, which is a rare pathology, with detailed physical examination, anterior rhinoscopy, computed tomography scan, magnetic resonance imaging and histopathologic examination. Endoscopic excision of the tumour was performed. After three years of follow-up of the patient in our clinic, there was no sign of any recurrence.

Keywords: Computed tomography scan, histopathologic examination, intestinal-type adenocarcinoma, magnetic resonance imaging, nasal cavity

Adenocarcinoma de la Cavidad Nasal: Reporte de un Caso

S Belli¹, U Taskin¹, A Caglar², US Tetikkurt²

RESUMEN

Reportamos un caso raro de adenocarcinoma sinonasal de tipo intestinal en la cavidad nasal. Un hombre de 31 años de edad se presentó con dolor de cabeza y epistaxis. Identificamos un tumor maligno, que es una patología rara, mediante exploración física detallada, rinoscopia anterior, tomografía computarizada (TC), resonancia magnética (MRI) y la examen histopatológico. Se llevó a cabo la escisión endoscópica del tumor. Luego de tres años de seguimiento del paciente en nuestra clínica, no hubo señal de recurrencia alguna.

Palabras claves: Tomografía computarizada (TC), la examen histopatológico, adenocarcinoma de tipo intestinal, resonancia magnética, cavidad nasal

West Indian Med J 2014; 63 (6): 678

INTRODUCTION

Intestinal-type sinonasal adenocarcinomas represent 8–25% of all malignant sinonasal tumours (1) and are very rare epithelial tumours of the nasal cavity and paranasal sinuses. Involvement of the ethmoid sinus, nasal cavities and maxillary sinus occurs in approximately 40%, 27% and 20% of cases, respectively. They often originate from the inferior and middle turbinates in the nasal cavity. The lesion presents as an irregular exophytic pink or white mass bulging in the nasal cavity or paranasal sinus, often with a necrotic friable appearance (2).

Here, we report a rare localization of nasal cavity highgrade intestinal-type adenocarcinoma.

Correspondence: Dr S Belli, Bağcılar Eğitim ve Araştırma Hastanesi Bağcılar, İstanbul, Turkey. E-mail: seydabelli@yahoo.com

CASE REPORT

A 31-year old man presented with headache and epistaxis. His complaints started six months ago. Right-sided epistaxis occured intermittently every week and lasted for 10 minutes. Bleeding always started just after a frontal headache. The frequency of his complaints increased. He had no history of nasal surgery, systemic disease, smoking, alcohol abuse and wood dust exposure.

The physical examination revealed that there was a yellowish in colour, fragile, painful, tendency to bleed vegetative lesion on the floor of the right nasal cavity. There was no pathological findings in both nasal cavities. Other otolaryngological examinations were normal.

Computed tomography (CT) imaging showed minimal thickening of the nasal mucosa on the floor of the right nasal cavity. On magnetic resonance imaging (MRI), there was a contrast enhancing mass on the right floor of the nasal cavity. There was significant extension of the lesion defined by the

From: ¹Department of Otorhinolaryngology and ²Department of Pathology, Bagcilar Education and Research Hospital, Istanbul, Turkey.

adjacent anatomical structures (Fig. 1). There was no invasion of neighbouring structure and no destruction of bony structures.



Fig. 1: Preoperative magnetic resonance imaging of the mass after godolinium.

Punch biopsy was obtained and revealed papillary adenocarcinoma of the intestinal-type. Positron emission tomography/CT scan and lower and upper gastrointestinal endoscopy showed no evidence of gastrointestinal primary tumours and no other metastatic lesions were identified.

Endoscopic excision of the tumoral lesion was performed and histopathological evaluation showed large areas of ulceration and stromal mucin extravasation. Haematoxylin and eosin stain revealed mucin lakes forming papillary structures seen in malignant tumour cells and necrosis. There was no lymphovascular and perineural invasion. Immunohistochemical examination of the tumour stromal cells with vimentin immunoreactivity was detected. Of mucin in the stroma and ponds, pancytokeratin strong immunoreactivity was detected in the tumour cells. Stromal tumour vascular endothelium CD34 (+) staining was observed. As a result, the pathology was defined as intestinal-type adenocarcinoma, papillary mucinous type (Fig. 2).



Fig. 2: Haematoxylin and eosin stained pathological examination of mucin lakes forming papillary structures seen in malignant tumour cells and necrosis.



Fig. 3: Postoperative magnetic resonance imaging of the mass after godolinium.

DISCUSSION

The nasal cavity and paranasal sinus carcinomas account for approximately 0.2% to 0.5% of all malignant tumours in the human body. Most of them are squamous cell carcinomas (3). Adenocarcinoma is a very rare tumour of the nasal cavity, often related to professional exposure to wood dust. This is a tumour with histological features resembling colorectal adenocarcinoma. It is considered to originate through intestinal metaplasia of the ciliated respiratory cells lining the schneiderian membrane. Epistaxis, unilateral nasal obstruction and rhinorrhoea are the most common presenting symptoms of intestinal-type adenocarcinomas which are the most common types of sinonasal adenocarcinomas, representing about 6-13% of malignancies of the sinonasal tract (4). The prognosis for intestinal-type adenocarcinoma is poor. Recurrences and subsequent deeply invasive local growth are frequent; however, lymph node and distant metastases are rare (4).

The causal relationship of wood dust and leather dust with the development of sinonasal intestinal-type adenocarcinomas has been established by several epidemiological studies from different countries. Association has also been reported for agricultural workers, food manufacturers, and motor vehicle drivers among men, and for textile occupations among women (2). About 20% of sinonasal intestinal-type adenocarcinomas seem to be idiopathic, without evidence of exposure to industrial dusts (4). In the index patient, the tumour was a idiopathic case and no risk factor had been identified.

Grossly, they have a fungating appearance with either polypoid or papillary features. Occasionally, they may have a gelatinous consistency resembling a mucocele (4). In our patient, the tumour appeared to be a yellow, bleeding polypoid mass.

In the nasal cavities, the inferior and middle turbinates are the sites of predilection (2). According to Cardesa and Slootweg, the most common location is the ethmoidal region (4). The mass is observed in the nasal cavity medial to the middle turbinate. The signs and symptoms of presentation of sinonasal intestinal-type adenocarcinomas are not specific.

Surgery is considered the standard treatment, although, in recent years, the use of chemotherapy and radiotherapy has increased (5). The index case had endoscopic endonasal resection. Tumour surgical margins were clean. Consultation with the radiation oncologist for radiation therapy was performed but the patient did not have radiation. In the threeyear follow-up, there were no local recurrence, lymph node metastasis or distant metastasis (Fig. 3).

In summary, we detected a case of sinonasal high-grade intestinal-type adenocarcinoma, the papillary mucinous type. The patient's only symptom was occasional nasal bleeding for a few months. We identified a malignant tumour, which is a rare pathology, with detailed physical examination, anterior rhinoscopy, CT scan, MRI and histologic examination.

REFERENCES

- Vivanco B, Llorente JL, Perez-Escuredo J, Marcos CS, Fresno MF, Hermsen MA. Benign lesions in mucosa adjacent to intestinal-type sinonasal adenocarcinoma. Pathol Res Int 2011; 8: 1–8.
- Barnes L, Eveson JW, Reichart P, Sidransky D. World Health Organisation classification of tumours. Pathology and genetics of head and neck tumours. Lyon: IARC Press; 2005: 20–22.
- 3. Batsakis JG. Tumors of the head and neck. Clinical and pathological considerations. 2nd ed. Baltimore: Williams & Wilkins; 1979.
- Cardesa A, Slootweg PJ, eds. Pathology of the head and neck. Berlin: Springer; 2006: 58–59.
- Lombardi G, Zustovich F, Puppa AD, Borgato L, Orvieto E, Manara R et al. Cisplatin and temozolomide combination in the treatment of leptomeningial carcinomatosis from ethmoid sinus intestinal-type adenocarcinoma. J Neurooncol 2011; 104: 381–6.