Primary Intestinal-type Adenocarcinoma of the Nasal Cavity
A Case Report
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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 tumor, which is a rare pathology, with detailed physical examination, anterior rhinoscopy, computed tomography scan, magnetic resonance imaging and histopathologic examination. Endoscopic excision of the tumor 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

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 high-grade intestinal-type adenocarcinoma.

CASE REPORT
A 31-year old man presented with headache and epistaxis. His complaints started six months ago. Right-sided epistaxis occurred 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
adjacent anatomical structures (Fig. 1). There was no invasion of neighbouring structure and no destruction of bony structures.

**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 rhinorrhea 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

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

**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 gadolinium.
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 three-year 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