

# A Case of Cranial Meningioma with Symptoms Similar to Nasopharyngeal Mass

## *Nazofarinks Kitleleri Olarak Belirti Veren Kranial Meninjiom Olgusu*

Case Report  
Olgu Sunumu

Serdar Altınay<sup>1</sup>, Şeyda Belli<sup>2</sup>, Tülin Şentürk<sup>2</sup>, Mehmet Tokgöz<sup>3</sup>, Emine Balkan<sup>3</sup>, Ümit Taşkın<sup>2</sup>

<sup>1</sup>Department of Pathology, Bağcılar Training and Research Hospital, İstanbul, Turkey

<sup>2</sup>Department of Ear Nose Throat, Bağcılar Training and Research Hospital, İstanbul, Turkey

<sup>3</sup>Department of Radiology, Bağcılar Training and Research Hospital, İstanbul, Turkey

### Abstract

Meningiomas are generally slow-growing benign tumors associated with the dura. They form lumps that mostly grow extra-axially, by repulsing, rather than infiltrating the surrounding neural parenchyma. Majority of meningiomas are intracranial. However, although rare, meningioma formation has been reported in almost all

other organs. We report the case of a patient with an extra-neuraxial meningioma presenting as a nasopharyngeal mass

**Keywords:** Extra-neuraxial meningioma, nasopharynx, nasopharyngeal mass

### Özet

Meninjiomlar genellikle yavaş büyüyen, iyi huylu dura ile ilişkili tümörlerdir. Bu tümörler, çevreleyen sinir parankimini infiltre ederek değil, iterek büyüyerek çoğunlukla ekstra-aksiyel kitleler oluştururlar. Meninjiomlar sıklıkla intrakranial tümörlerdir. Ancak nadir de olsa tüm diğer organ yerleşimleri bildirilmiştir. Biz bu olgu sunumu ile,

nazofarinkste kitle olarak belirti veren ektranöroaksiyal meninjioma vakasına meslektaşlarımızın dikkatini çekmek istedik.

**Anahtar Kelimeler:** Ektranöroaksiyal meninjiom, nazofarinks, nazofarinks kitleleri

### Introduction

Meningiomas, the second most common benign tumors of the central nervous system, account for 13% to 26% of all intracranial neoplasms (1). Extracranial or extraspinal meningiomas are seen in 6%-17% of all meningiomas (2). Head and neck meningiomas are the most commonly seen extracranial meningiomas (1). They are usually seen as a spread of primary intracranial tumors. The facial bones, orbit, temporal bone, middle ear cavity, nasal cavity, paranasal sinuses, and nasopharynx are the most common areas for head and neck meningiomas (1, 3).

ed by significant hyperemia. Microscopic examination was normal. There was no mass in the head and neck region.

The magnetic resonance imaging (MRI) demonstrated a lump with a diameter of 88×68 mm with contrast uptake, starting from the corner of the right cerebellopontine, which had a dural tail, extending along the nasopharynx-oropharynx-hypopharynx, occasional lobular contours, solid components, and calcification sites (Figure 1, 2).

An endoscopic nasopharyngeal punch biopsy was taken. There was a tumoral infiltration characterized by whorl formation caused by meningotheelial cells (Figure 3). The tumor cells were oval vesicular nuclear cells with an eosinophilic syncytial cytoplasm, demonstrating mild pleomorphism. No evident mitotic activity or necrosis was observed. No immune reactivity was observed with Pan CK in the immunohistochemical assessment, whereas a strong focal positive reaction was detected with the epithelial membrane antigen (EMA) and vimentin in the tumor cells (Figure 4). The Ki-67 index was 5%. Based on these symptoms, the patient was reported to be compliant with transitional-type meningioma (WHO grade I).

Here we report an atypical presentation of a nasopharyngeal meningioma, which was considered as a nasopharyngeal carcinoma, in an old woman.

### Case Report

A 79-year-old woman had a complaint of numbness in her whole face for 1-2 months. She had no pain, nasal obstruction, or epistaxis. On endoscopic nasopharyngeal examination, there was an atypical non-ulcerative mass in the nasopharynx extending to the oropharynx. The contour of the nasopharyngeal mass was lobulated and represent-



This study was presented as poster presentation at the 6<sup>th</sup> International Nasopharyngeal Carcinoma Symposium, 20-22 June 2013, İstanbul, Turkey.

Bu çalışma, 6. Uluslararası Nazofarenks Kanseri Sempozyumu'nda poster bildirisi olarak yayımlanmıştır, 20-22 Haziran 2013, İstanbul, Türkiye.

Address for Correspondence/Yazışma Adresi:

Şeyda Belli, Bağcılar Eğitim ve Araştırma Hastanesi, Kulak Burun Boğaz Hastalıkları Anabilim Dalı, İstanbul, Türkiye

Phone: +90 212 505 11 16

E-mail: chanulku@yahoo.com

Received Date/Geliş Tarihi: 30.04.2014

Accepted Date/Kabul Tarihi: 09.01.2015

© Copyright 2015 by Official Journal of the Turkish Society of Otorhinolaryngology and Head and Neck Surgery Available online at [www.turkarchotorhinolaryngol.org](http://www.turkarchotorhinolaryngol.org)  
© Telif Hakkı 2015 Türk Kulak Burun Boğaz ve Baş Boyun Cerrahisi Derneği Makale metnine [www.turkarchotorhinolaryngol.org](http://www.turkarchotorhinolaryngol.org) web sayfasından ulaşılabilir.  
DOI:10.5152/tao.2015.603



Figure 1. a-c. Coronal (a), sagittal (b) and axial (c) T1-sectional images of magnetic resonance imaging demonstrated a lump at a diameter of 88x68 mm with contrast uptake

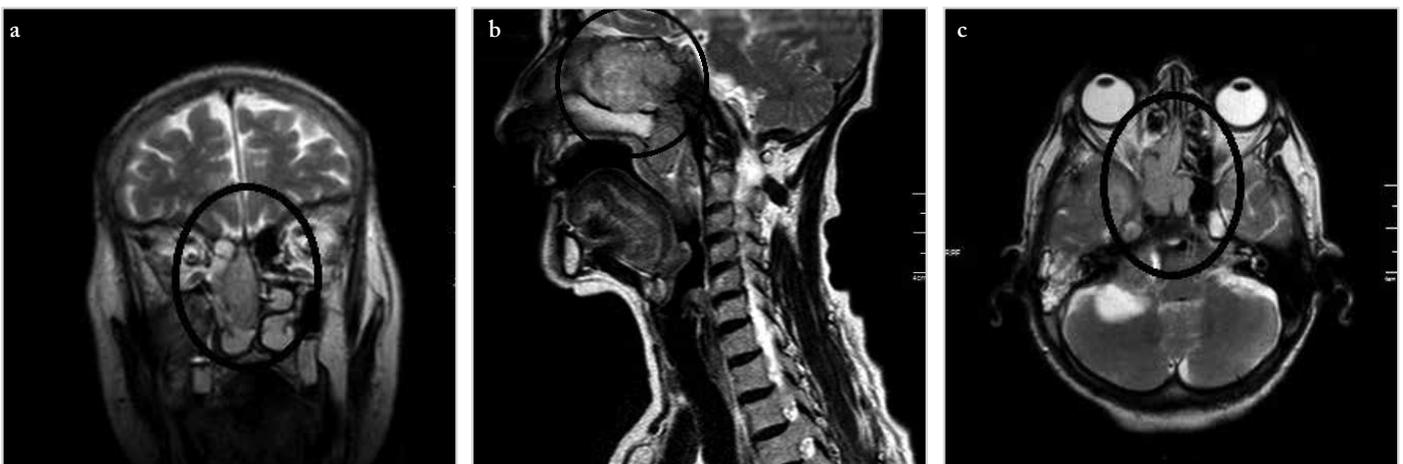


Figure 2. a-c. Coronal (a), sagittal (b) and axial (c) T2-sectional images of magnetic resonance imaging demonstrated a tumor beginning from the corner of the right cerebellopontine and extending along the nasopharynx-orpharynx-hypopharynx

Our patient refused surgical treatment options. Ten months after the diagnosis, she died because of cardiac problems.

The patient was informed about the rarity of the diagnosis and the conflicts of the treatment options, and she gave an informed consent for this case report.

## Discussion

Meningiomas are a diverse set of tumors arising from the meninges, the membranous layers surrounding the central nervous system. They arise from the arachnoid “cap” cells of the arachnoid villi in the meninges (1). Approximately 80% of all meningiomas are benign (1). The most common subtypes are meningotheliomatous (63%), transitional or mixed-type (19%), fibrous (13%), and psammomatous (2%) (4). Our patient had a transitional type of meningioma, which was classified as a relatively rare WHO grade I of extra-neuraxial meningiomas.

Extracranial meningiomas may become primary or an extension of intracranial tumors. Primary extracranial meningiomas are seen alone without an intracranial lesion. The head and neck region is the most common location for extra-neuraxi-

al meningiomas (5). Nasopharyngeal meningiomas are rarely reported in literature. There was no nasopharyngeal symptom in our patient. She only had atypical numbness in her face. Her endoscopic examination revealed a nasopharyngeal tumor. The diagnosis of nasopharyngeal meningioma was made after a histopathological examination. Her lesion was both intracranially and extracranially located. It was thought to be an extracranial expansion of intracranial meningiomas through the nasopharynx without any symptom. Immunohistochemical studies confirmed the diagnosis of a meningioma with positive reactions for EMA and vimentin (1, 3). The cell proliferation marker Ki-67 was weakly positive (1). In our patient, EMA was highly positive, in agreement with literature. In accordance with literature, the rate of the 5% level of Ki-67 was positive.

The primary treatment modality for extracranial and extra-neuraxial meningiomas is complete surgical resection without any adjuvant therapy. Recurrence after complete surgical resection is very rare (1, 6). Our patient was old, and she refused any surgical therapy. She died because of cardiac problems 10 months later.

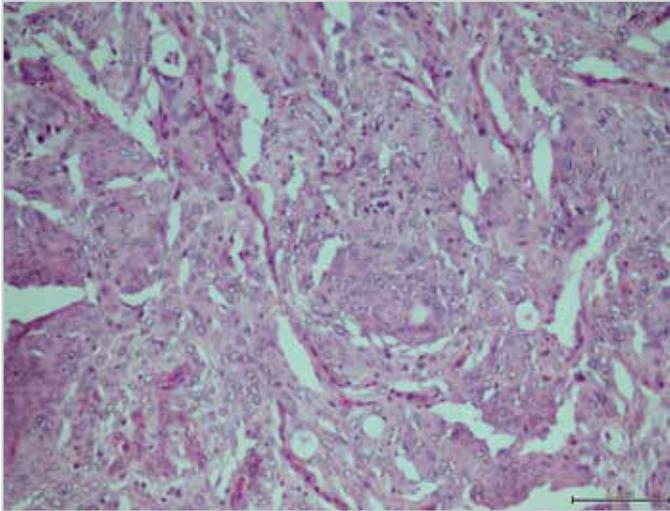


Figure 3. Histopathological examination shows under respiratory epithelial neoplastic development of meningeothelial cells and "whorl" formation (H&E x200)

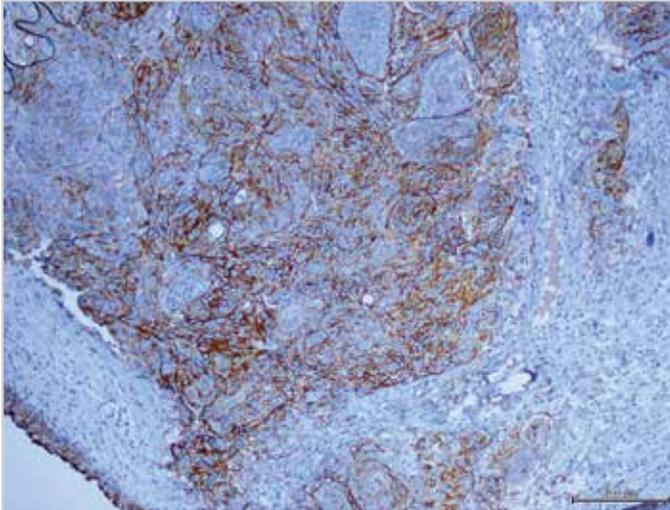


Figure 4. Immunohistochemical examination; strong EMA positivity and low Ki-67 index are seen in the meningeothelial cells (x100)

## Conclusion

Meningiomas may demonstrate an atypical presentation that may mimic nasopharyngeal neoplastic lesions with their nasopharyngeal extensions. Thus, it is important to consider a multidisciplinary approach in the preoperative diagnosis in the presence of neurological signs and different radiological symptoms.

**Informed Consent:** Written informed consent was obtained from the patient.

**Peer-review:** Externally peer-reviewed.

**Author Contributions:** Concept - Ş.B., S.A.; Design - S.A., M.T., E.B.; Supervision - Ş.B., T.Ş.; Funding - S.A., M.T., E.B.; Materials - S.A., Ş.B., T.Ş.; Data Collection and/or Processing - Ş.B., T.Ş.; Analysis and/or Interpretation - Ş.B., T.Ş., S.A., M.T., E.B., Ü.T.; Literature Review - Ş.B.; Writing - Ş.B., Ü.T.; Critical Review - Ü.T., Ş.B.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study has received no financial support.

**Hasta Onamı:** Yazılı hasta onamı hastadan alınmıştır.

**Hakem Değerlendirmesi:** Dış bağımsız.

**Yazar Katkıları:** Fikir - Ş.B., S.A.; Tasarım - S.A., M.T., E.B.; Denetleme - Ş.B., T.Ş.; Kaynaklar - S.A., M.T., E.B.; Malzemeler - S.A., Ş.B., T.Ş.; Veri Toplanması ve/veya İşlemesi - Ş.B., T.Ş.; Analiz ve/veya Yorum - Ş.B., T.Ş., S.A., M.T., E.B., Ü.T.; Literatür Taraması - Ş.B.; Yazıyı Yazan - Ş.B., Ü.T.; Eleştirel İnceleme - Ü.T., Ş.B.

**Çıkar Çatışması:** Yazarlar çıkar çatışması bildirmemişlerdir.

**Finansal Destek:** Yazarlar bu çalışma için finansal destek almadıklarını beyan etmişlerdir.

## References

1. Maeng JW, Kim YH, Seo J, Kim SW. Primary extracranial meningioma presenting as a cheek mass. *Clin Exp Otorhinolaryngol* 2013; 6: 266-8. [\[CrossRef\]](#)
2. Aiyer RG, Prashanth V, Ambani K, Bhat VS, Soni GB. Primary extracranial meningioma of paranasal sinuses. *Indian J Otolaryngol Head Neck Surg* 2013; 65 (Suppl 2): 384-7. [\[CrossRef\]](#)
3. Thompson LD, Gyure KA. Extracranial sinonasal tract meningiomas: a clinicopathologic study of 30 cases with a review of the literature. *Am J Surg Pathol* 2000; 24: 640-50. [\[CrossRef\]](#)
4. Louis DN, Ohgaki H, Wiestler OD, Cavenee WK, Burger PC, Jouvet A, et al. The 2007 WHO classification of tumours of the central nervous system. *Acta Neuropathol* 2007; 114: 97-109. [\[CrossRef\]](#)
5. Kershnik M, Callender DL, Batsakis JG. Extracranial, extraspinal meningiomas of the head and neck. *Ann Otol Rhinol Laryngol* 1993; 102: 967-70. [\[CrossRef\]](#)
6. Tsutsumi S, Izumi H, Yasumoto Y, Ito M. Convexity en plaque meningioma manifesting as subcutaneous mass: case report. *Neurol Med Chir (Tokyo)* 2013; 53: 727-9. [\[CrossRef\]](#)