

# A right eye exophthalmia revealing an en-plaque meningioma in spheno-orbital plate: a case report

**Keywords:** en-plaque meningioma, exophthalmia, spheno-orbital plate, tumor

## Introduction

The intraosseous meningioma is a variety of ectopic meningioma in which the meningo epithelial cells invade the bone wall and is responsible for hyperostosis.<sup>1</sup> The En plaque meningioma is a variant of intraosseous meningiomas and is considered to be a rare tumor occurring in most cases in the spheno orbital area.<sup>2,3</sup> We report a clinical case of an en-plaque meningioma in spheno orbital plate of the right eye.

## Clinical case

Mrs F. a 39 years old patient with a medical history of hypertension treated with beta blocker and of a type 2 diabetes treated with oral medication. She is referred to our department for chronic headaches, sight impairment, and a right eye proptosis evolving for a year and worsening over time without diplopia. The ocular examination of the right eye shows a visual acuity at 8/10 as well as a proptosis that is scaled grade I, axile, painful, non pulsatile and non reductible without any eye movement limitation. The right cornea suffered an exposure keratitis and the intraocular pressure was normal in both eyes (Figure 1). The right eye fund us showed no abnormalities; neither an optic nerve compression nor any choroid folds. A complete neurological examination was performed on the patient which was completely normal. The MRI scan shows a spheno orbital meningeal tumor highly in favor of an En plaque meningioma (Figure 2). The patient was admitted in the Neurosurgical department where she is to undergo a surgical resection followed by a spheno orbital reconstruction after getting the biopsy results.

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Figure 1 Right eye proptosis.

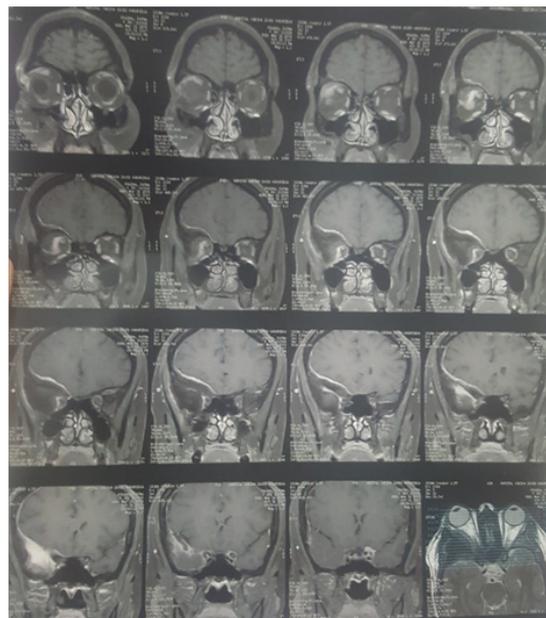


Figure 2 MRI scan showing a spheno orbital meningeal tumor highly in favor of an en plaque meningioma.

## Discussion

The ectopic meningioma are defined to be tumors developing out of the meningeal layers.<sup>1</sup> The sphenoidal orbital region is known to be highly affected by these type of tumors.<sup>1,4,5</sup> The incidence reported is of 1% to 2% of all meningeal tumors.<sup>4,5</sup> In most cases, the patients suffering from an en-plaque meningioma present with a progressive and painless exophthalmia as well as a gradual loss of vision.<sup>1,2,4</sup> In terms of histology, the en-plaque meningiomas are known to be benign tumors with a progressive growth rate.<sup>1</sup> The MRI including T1 sequences with the injection of the Gadolinium is shown to be very useful in the diagnosis process of the en-plaque meningioma.<sup>7,9</sup> Still the main diagnosis is histological. The differential diagnosis of en-plaque meningioma includes the fibrosis dysplasia and bone metastasis.<sup>1,2,6,5,7,10</sup> The en-plaque meningioma requires a surgical treatment followed by external radiotherapy sessions.<sup>3,11,12</sup> The follow up should include a regular neurological and ophthalmological examination as well as an annual MRI. The chances of a full recovery are shown to be very low if the initial visual acuity is low by the time of the diagnosis.<sup>3,9</sup>

## Conclusion

The En plaque sphenoidal orbital meningioma is a rare tumor, with a slow evolution responsible for mainly ocular symptoms. The surgical resection is the main treatment with high rates of recovery, however if the eyesight is initially severely reduced, the eye vision may recover unfully and thus the patient should be well informed about the poor results of the operation in this case.

## Acknowledgements

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## Conflict of interest

Author declares that there is no conflict of interest.

## References

1. Charbel FT, Hyun H, Misra M, et al. Juxtaorbital en plaque meningiomas: report of four cases and review of literature. *Radiol Clin North Am.* 1999;37(1):89–100.
2. Nanto M, Tsuji N, Miki J, et al. A case of intraosseous meningioma with extracranial progression having difficulty in making a preoperative diagnosis. *No Shinkei Geka.* 2005;33(1):51–56.
3. Macarez R, Bazin S, Civit T, et al. Postoperative visual improvement in sphenoidal orbital meningioma: a case report. *J Fr Ophtalmol.* 2003;26(4):375–380.
4. Nil Tokgoz, Yusuf Oner A, Memduh Kaymaz, et al. Primary Intraosseous Meningioma: CT and MRI Appearance. *AJNR Am J Neuroradiol.* 2005;26(8):2053–2056.
5. Muzumdar DP, Vengsarkar US, Bhatjiwale MG, et al. Diffuse Calvarial Méningioma: a case Report. *Journal of postgraduate medicine.* 2001;47(2):116–118.
6. Crawford TS, Kleinschmidt-DeMasters BK, Lillehei KO. Primary intraosseous meningioma: case report. *J Neurosurg.* 1995;83(5):912–915.
7. Shuichi Yamada, Shozo Kawai, Taiji Yonezawa. Cervical extradural En-plaque meningioma: case report. *Neuro Med Chir.* 2007;47(1):36–39.
8. Honeybul S, Neil-Dwyer G, Lang DA, et al. Sphenoidal Wing Meningioma en Plaque: a clinical review. *Acta Neurochirurgica.* 2001;143(8):749–758.
9. Franquet N, Pellerin P, Dhellemmes P, et al. Manifestations ophtalmologiques des méningiomes sphéno-orbitaires: à propos de 23 cas chirurgicaux. *Journal Français d'Ophtalmologie.* 2009;32(1):16–19.
10. Daffner RH, Yakulis R, Maroon JC. Intraosseous meningioma. *Skeletal Radiol.* 1998;27(2):108–111.
11. Antonio Carrizo, Armando Basso. Current surgical treatment for sphenoidal orbital meningiomas. *Surg Neurol.* 1998;50(6):574–578.
12. Erol Sandalcioğlu I, Thomas Gasser, Christopher Mohr, et al. Sphenoidal orbital meningiomas: interdisciplinary surgical approach, respectability and long-term results. *Journal of Cranio-Maxillofacial Surgery.* 2005;33(4):260–266.