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Video Abstract

Optic nerve sheath meningioma endoscopic endonasal surgical management

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ABSTRACT

Background: Meningiomas of the optic sheath have been traditionally treated with radiotherapy, among other reasons, because of the poor results in terms of visual preservation of the open surgical approaches.

Case Description: Two cases of optic nerve meningioma were operated through an endoscopic endonasal expanded approach due to rapidly progressing visual deterioration and doubtful diagnosis. In the first case an exclusively bone decompression was performed. In the second one a partial resection of the intradural portion and complete opening of the dural sheath was undertaken. In both cases visual acuity remained stable without further treatment for the 2 years follow up.

Conclusions: Endoscopic endonasal decompression of the optic nerve by removal of the optic canal and opening of the optic sheath is safe. This approach is feasible for optic sheath meningioma. This treatment might be considered as an option in patients with rapidly deteriorating visual acuity.

Keywords: Optic Sheath Meningioma, Endoscopic Endonasal Expanded Approach, Optic Nerve Decompression

[Video 1]-Available on:
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Annotations[1-7]

1) 0:05 – Case 1
2) 0:31 – Preoperative MRI
3) 1:26 – Sphenoidotomy
4) 1:40 – Drilling of the optic canal
5) 2:04 – Roof of the optic canal is removed
6) 2:26 – Neronavigation confirms that the bony decompression is completed
7) 2:33 – Postsurgical images of Case 1
8) 2:54 – Case 2
9) 3:25 – Preoperative MRI
10) 3:58 – Drilling of the optic canal

11) 4:30 – Roof of the optic canal
12) 5:03 – Floor of the canal/Optic Strut
13) 5:25 – Dura opening
14) 5:28 – Olfactory nerve
15) 5:50 – Optic sheath opening
16) 6:14 – Tumor removal
17) 6:43 – Optic nerve
18) 7:21 – Ophthalmic Artery
19) 7:50 – Final view
20) 7:56 – Tisseal®
21) 8:00 – Duragen®
22) 8:25 – Nasoseptal flap
23) 8:36 – Surgicel®
24) 8:39 – Tisseal® and final appearance
25) 8:50 – Postsurgical images of Case 2
26) 9:21 – Conclusion

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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