

see also [Orbital meningioma](#)

Meningiomas of the anterior and middle skull base frequently involve the optic nerve and cause progressive visual impairment. Surgical decompression of the optic nerve is the only option to preserve visual function.

Depending on the invaded structures, optic nerve decompression can be part of a complete tumor removal or the main surgical intention in terms of local debulking. However, bony decompression of the optic canal including anterior clinoidectomy for optic nerve decompression is still a surgical maneuver under discussion.

From 2006 to 2011, 46 consecutive patients with skull base meningiomas in and around the optic canal were operated. The pterional approach was tailored for each patient. Resection included bony decompression of the optic canal with or without anterior clinoidectomy. Visual acuity and fields were evaluated pre- and postoperatively. RESULTS:

Fifty-three percent of patients underwent anterior clinoidectomy, 23 % optic canal unroofing, and 24 % any bony decompression. In 21 patients (46 %), gross total resection (GTR, Simpson grade I or II) was achieved, while 25 patients (54 %) received subtotal resection (STR, Simpson grade III or IV). Sixty-three percent of patients presented with preoperative visual impairment. Postoperative visual changes were significantly related to preoperative visual function. While all patients with normal preoperative vision remained unchanged, in patients with impaired vision, surgery caused improvement in 70 % and deterioration in 10 % of patients ($p < 0.0001$). In patients with anterior clinoidectomy, vision improved more frequently than without anterior clinoidectomy ($p < 0.05$).

Anterior clinoidectomy is safe and may improve visual outcome in meningiomas in and around the optic canal ¹⁾.

¹⁾

Lehmberg J, Krieg SM, Mueller B, Meyer B. Impact of anterior clinoidectomy on visual function after resection of meningiomas in and around the optic canal. *Acta Neurochir (Wien)*. 2013 Jul;155(7):1293-9. doi: 10.1007/s00701-013-1741-x. Epub 2013 May 11. PubMed PMID: 23665725; PubMed Central PMCID: PMC3683144.

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