

Endoscopic transtuberculum transplanum approach

Ten fresh human head silicon-injected specimens underwent an endoscopic [transtuberculum transplanum approach](#), followed by 2-piece [orbitozygomatic craniotomy](#) to allow identification of 20 [optic canals](#) OCs. After completing up to 270° of endonasal bony decompression of the OC, a dural incision started at the [sella](#) and continued superiorly across the superior [intercavernous sinus](#). Subsequently the dural opening was extended anterolaterally across the dura of the [prechiasmatic sulcus](#), [limbus sphenoidale](#), and [planum](#).

Endonasally, the length of the osseous OC was approximately 6 mm and equivalent to the length of the lateral [opticocarotid recess](#), as measured anteroposteriorly. The [ophthalmic artery](#) arose from the supraclinoidal [carotid artery](#) at approximately 2.5 mm from the medial osseous OC entrance. Transcranial correlation of the endonasal dural incision confirmed medial detachment of the [falciform ligament](#) and exposure of the preforaminal ON.

The lateral opticocarotid recess allows distinction of the preforaminal ON, roofed by the falciform ligament from the intracanalicular segment in the osseous OC. This facilitates the preoperative surgical strategy regarding the extent of OC decompression and dural opening. Extensive endonasal decompression of the OC and division of the falciform ligament is feasible ¹⁾.

Indications

[Retrochiasmatic craniopharyngioma](#) ²⁾.

1)

Abhinav K, Acosta Y, Wang WH, Bonilla LR, Koutourousiou M, Wang E, Synderman C, Gardner P, Fernandez-Miranda JC. Endoscopic Endonasal Approach to the Optic Canal: Anatomic Considerations and Surgical Relevance. *Neurosurgery*. 2015 Jul 14. [Epub ahead of print] PubMed PMID: 26177488.

2)

Liu JK, Eloy JA. Endoscopic endonasal transplanum transtuberculum approach for resection of retrochiasmatic craniopharyngioma. *J Neurosurg*. 2012 Jan;122 Suppl:E2. PubMed PMID: 22251250.

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