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# The endonasal midline inferior intercavernous approach to the cavernous sinus: technical note, cadaveric step-by-step illustration, and case presentation

[Rima S Rindler](#)<sup>1,2</sup>, [Luciano C Leonel](#)<sup>1,2</sup>, [Stephen Graepel](#)<sup>1</sup>, [Edoardo Agosti](#)<sup>1,2</sup>, [Panagiotis Kerezoudis](#)<sup>1,2</sup>, [Carlos D Pinheiro-Neto](#)<sup>1,2,3</sup>, [Maria Peris-Celda](#)<sup>4,5,6</sup>

Affiliations expand

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## Abstract

**Purpose:** Traditional endoscopic endonasal approaches to the cavernous sinus (CS) open the anterior CS wall just medial to the internal carotid artery (ICA), posing risk of vascular injury. This work describes a potentially safer midline sellar entry point for accessing the CS utilizing its connection with the inferior intercavernous sinus (IICS) when anatomically present.

**Methods:** The technique for the midline intercavernous dural access is described and depicted with cadaveric dissections and a clinical case.

**Results:** An endoscopic endonasal approach exposed the periosteal dural layer of anterior sella and CS. The IICS was opened sharply in midline through its periosteal layer. The feather knife was inserted and advanced laterally within the IICS toward the anterior CS wall, thereby gradually incising the periosteal layer of the IICS. The knife was turned superiorly then inferiorly in a vertical direction to open the anterior CS wall. This provided excellent access to the CS compartments, maintained the meningeal layer of the IICS and the medial CS wall, and avoided an initial dural incision immediately adjacent to the ICA.

**Conclusion:** The midline intercavernous dural access to the CS assisted by a 90° dissector-blade is an effective modification to previously described techniques, with potentially lower risk to the ICA.

**Keywords:** Cavernous sinus; Endoscopic endonasal; Feather knife; Intercavernous; Meningioma.