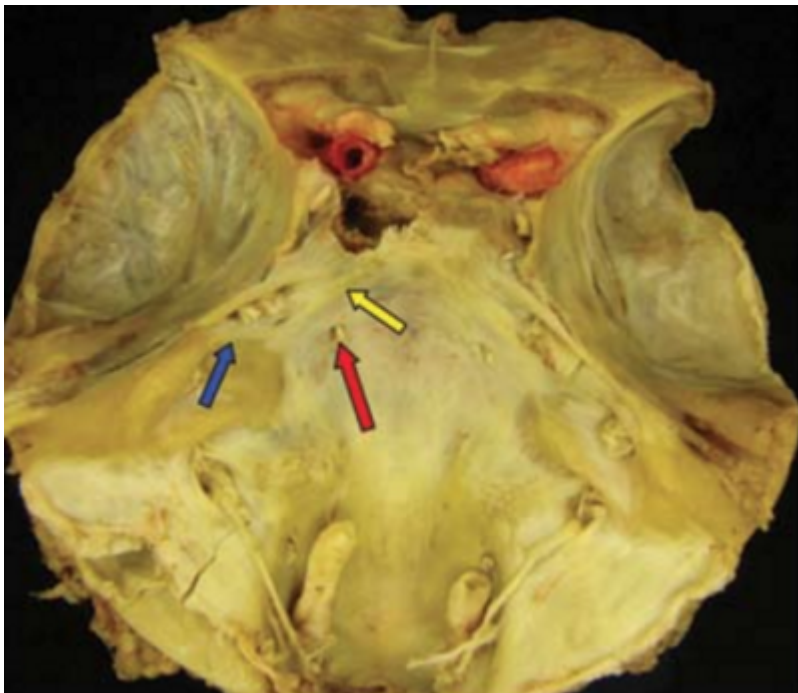


Gruber's ligament

The **abducens nerve** lies within the **Dorello's Canal**, coursing toward the **cavernous sinus** below a strong fibrous trabecula known as the petrosphenoidal ligament or **Gruber's ligament**.



Yellow arrow

The petrosphenoidal ligament (Gruber's ligament) extends from the petrous apex to the posterior clinoid process and forms the roof of Dorello's canal through which the abducens nerve passes. It forms the superior portion of the **falciform ligament** and is located at the confluence of the basilar plexus, cavernous sinus, inferior petrosal sinus, and sphenoparietal sinus. The petrolingual ligament forms the inferior portion of falciform ligament and covers the lateral segment of internal carotid artery. The length of the ligament has been reported to be between 13.2 and 13.9 mm in various studies.

Destrieux et al and Icke et al described the ligament as either butterfly shaped or triangular, with the base inserting on the posterior clinoid process. However, Iaconetta et al and Liu et al found the base attached to the petrous apex. The ligament has been found to be either complete, fragmented, or hypoplastic. Hypoplastic ligament occurred up to 10% in the study by Liu et al, 3% in the study by Iaconetta et al,¹⁵ and 5% by Icke et al.

Calcification of the ligament was also noted in 5% of the specimens in the study by Icke et al. The petrosphenoidal ligament functions to fix the sheath of the abducens nerve in the petroclival area. It protects the abducens nerve from damage during petrous drilling for anterior petrosectomy and serves as a landmark for the abducens nerve during surgery¹⁾

¹⁾

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3578596/>

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