



# Stereoscopic Surgical Video of Combined Petrosectomy With Virtual Reality Headset: 3-Dimensional Operative Video

Submitted by Beatrice Guillaumat on Mon, 11/19/2018 - 12:49

Titre	Stereoscopic Surgical Video of Combined Petrosectomy With Virtual Reality Headset: 3-Dimensional Operative Video
Type de publication	Article de revue
Auteur	Bernard, Florian [1], Troude, Lucas [2], Laccourreye, Laurent [3], Roche, Pierre-Hugues [4], Fournier, Henri-Dominique [5]
Editeur	Oxford University Press
Type	Article scientifique dans une revue à comité de lecture
Année	2018
Langue	Anglais
Date	16 Nov. 2018
Titre de la revue	Operative Neurosurgery
ISSN	2332-4252
Mots-clés	Combined petrosectomy [6], Skull base meningioma [7], Skull base surgery [8], virtual reality [9]
Résumé en anglais	<p>The use of 3-dimensional (3D) videos allows students to visualize surgical procedures from the perspective of the surgeon without missing the essential parts.<sup>1</sup> This 3D commented video demonstrates the operative technique and surgical nuances of the combined petrosectomy, visualize using virtual reality headsets.</p> <p>Historically, traditional intradural cisternal routes using suboccipital and pterional approaches have been proposed to remove petroclival tumors.<sup>2-5</sup> It allows rapid identification of neurovascular structures and a short exposure time. However, access to the petroclival region is far, not direct, and requires intradural cerebral retraction.<sup>6</sup> In order to improve the access for tumoral dissection, lateral transpetrosal approaches have been proposed.<sup>7-12</sup> The extradural route shortened the distance to the petroclival region, allows to better preserve the veins, to decrease the cerebral retraction, to interrupt early the tumor vascular supply, and a larger extent of resection.<sup>6</sup> Transpetrosal approaches includes middle fossa approach<sup>8,10</sup> (removing the petrous apex), posterior petrosal approach<sup>9,13,14</sup> (removing of presigmoid retrolabyrinthine bone), and translabyrinthine petrosectomy.<sup>12</sup></p> <p>A combined petrosectomy may be used to approach larger tumor extending across the clival midline, upward to the tentorium or downward to the lower cranial nerves.<sup>6,10,15,16</sup> Alternatively, according to Nanda, a retro-sigmoid approach may need to be performed to avoid critical draining veins injury.<sup>10,17</sup> Good resection and outcomes are obtained when experienced surgeons use familiar approaches and microsurgical techniques.<sup>10</sup></p>
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua18086">http://okina.univ-angers.fr/publications/ua18086</a> [10]
DOI	10.1093/ons/opy228 [11]
Lien vers le document	<a href="https://academic.oup.com/ons/advance-article/doi/10.1093/ons/opy228/5106134">https://academic.oup.com/ons/advance-article/doi/10.1093/ons/opy228/5106134</a> [12]

---

## Liens

- [1] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=27513>
- [2] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=30448>
- [3] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=921>
- [4] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=30450>
- [5] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=30451>
- [6] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=26043>
- [7] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=26044>
- [8] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=26045>
- [9] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=5857>
- [10] <http://okina.univ-angers.fr/publications/ua18086>
- [11] <http://dx.doi.org/10.1093/ons/opy228>
- [12] <https://academic.oup.com/ons/advance-article/doi/10.1093/ons/opy228/5106134>

Publié sur *Okina* (<http://okina.univ-angers.fr>)