

# Suboccipital transtentorial approach

This [transtentorial approach](#) was originally proposed by [Kenneth Grant Jamieson](#) and modified by Lapras who by changing the shape of the bone flap obtained the elevation of the occipital lobe which consequently resulted in a better exposition of this deep region. The reason why this approach became the basis for their treatment is particularly related to the personal experience of Lapras who reported his fantastic experience of surgery in this deep area and demonstrated the advantages of the suboccipital transtentorial approach.

Out of 277 patients operated from 1982 to 2012 in Lyon for a pineal tumor, 233 were treated by a sub-occipital approach: 153 males, 125 females, 75 patients of pediatric age. The majority of patients were operated on in a sitting position which represents a surgical specialty of the anesthesiological school of Lyon.

Complete tumor removal was possible in 135 patients (58%) and partial in 60 patients (26%). For 38 patients, it was not possible to establish the quality of surgical resection. The incidence of hemianopsia decreased to less than 2% of cases while the incidence of severe pneumocephaly which requires a prolonged intensive care hospitalization was less than 4% of cases. Mortality related to this surgical approach in the Lyonnais school series was 0% during this period.

In the experience of Mottolese et al. the sub-occipital transtentorial approach seems the best approach for pineal tumors because it permits a large exposition of the pineal region favoring the removal of the tumor with a lateral extension and also for tumors extending low into the posterior cranial fossa. In fact, this is preferred approach because it has been used in a large majority of cases. However, surgeons have to be familiar with other possible approaches to obtain the best result in terms of removal and also to decrease the rate of sequelae to improve the quality of life of these patients <sup>1)</sup>.

<sup>1)</sup>

Mottolese C, Szathmari A, Ricci-Franchi AC, Beuriat PA, Grassiot B. The sub-occipital transtentorial approach revisited base on our own experience. Neurochirurgie. 2014 May 20. pii: S0028-3770(14)00021-6. doi: 10.1016/j.neuchi.2013.12.005. [Epub ahead of print] PubMed PMID: 24856312.

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