

## **Posterior Fossa Tumors: Special Issue**

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This edition of APN is entirely dedicated to posterior fossa tumors. Very common in the daily routine of pediatric neurosurgeons, these tumors remain one of the most challenging pathologies we must face. The importance and complexity of the anatomical structures of the posterior fossa, associated with the enormous histological variety of neoplastic lesions in this region, make its therapeutic approach difficult and even more challenging. The degree of surgical resection plays a determining role in the prognosis and cure possibilities for the children with posterior fossa tumors; on the other hand, gross total resection is related to the much feared cerebellar mutism syndrome, related to serious cognitive and behavioral sequelae. Every pediatric neurosurgeon's nightmare, this subject deserves special attention in our edition. Ballestero and Juca review the literature, discuss the concepts of mutism, predisposing factors, pathophysiology, and available treatments.

However, mutism prevention after surgical resection is essential. In addition to excellent mastery of microneurosurgery techniques and in-depth anatomical knowledge of the structures of the posterior fossa, pediatric neurosurgeons must use all the most advanced technologies to protect their patients and obtain the best results. Therefore, Kodangeski and Pinheiro discuss the use of electrophysiological monitoring during resection surgeries for posterior fossa tumors. Ahmed also emphasizes the importance of neuronavigation in these surgeries, as a significant tool to reduce morbidity and mortality.

Around 70 to 90% of posterior fossa tumors present with hydrocephalus. The treatment of hydrocephalus before, during or after tumor resection is a very controversial subject, with different approaches among groups. Mandic retrospectively applies the success scores of endoscopic third ventriculocysternostomy in a group of



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patients with posterior fossa tumors and analyzes its efficiency.

Costa pays special attention to posterior fossa ependymomas. Despite the explosion of genomic and epigenomic knowledge of these tumors in recent decades, surgery still plays an essential role in their treatment because the main objective as gross total resection represents a great technical challenge for the neurosurgeon.

Besides to medulloblastomas, astrocytoma and ependymomas, more rarely other histological types can involve the posterior fossa and should be considered as differential diagnosis of these lesions. Therefore, Lopez presents clinical cases of choroid plexus papilloma and Rabelo Rodrigues reviews the cases of hemangioblastomas found in the literature.

Even though posterior fossa tumors are predominant in children of preschool and school age, Dassi presents a series of cases in patients under two years of age, highlighting the histological characteristics and treatment strategies in this age group. The final result of this edition is a set of articles that highlight the complexity of posterior fossa tumors and the challenges of their treatment. Although these are the most common intracranial tumors in childhood and are part of the routine of every pediatric neurosurgery service, the war against those tumors has not been definitively won. We still lack greater understanding, and the exchange of experiences is increasingly necessary. We hope these articles can help all readers in their daily battles.

Our special thanks to all the authors who worked on this edition and to the editorial staff who, with all their dedication, made it possible.

Have an excellent read!

