All pediatric patients who underwent an OITT craniotomy for a superior cerebellar lesion by a single surgeon over a 5-year period were included in this retrospective analysis. Patient demographics and clinical data were collected.

Thirteen pediatric patients were identified. Cases included twelve tumors and one arteriovenous malformation. Gross total resection was achieved in 92% of cases. No patients developed posterior fossa syndrome. Two patients had transient homonymous hemianopsia that resolved by 1 month post-operatively. There were no permanent neurological deficits.

For superomedial cerebellar lesions presenting to the tentorial surface of the superior cerebellum in patients with normal to steep tentorial angles, the OITT approach is effective and safe. This approach has a low risk of posterior fossa syndrome and permanent visual deficits when applied appropriately. Patient selection is critical for maximizing the advantages of the OITT for superior cerebellar lesions [1].

A retrospective analysis was conducted at a single large pediatric hospital. Clinical, radiographic, and histological data were examined in children who were surgically treated for posterior fossa tumors between May 1, 1994, and June 1, 2011. The incidence of postoperative facial weakness was documented. A multivariate logistic regression model was used to analyze the predictive ability of clinicoradiological variables for facial weakness.

A total of 163 patients were included in this study. The average age at surgery was 7.4 ± 4.7 years, and tumor pathologies included astrocytoma (44%), medulloblastoma (36%), and ependymoma (20%). The lesions of 27 patients (17%) were considered high grade in nature. Thirteen patients (8%) exhibited preoperative symptoms of facial palsy. The overall incidence of postoperative facial palsy was 26% (43 patients), and the incidence of new postoperative facial palsy in patients without preoperative facial weakness was 20% (30 patients). The presence of a preoperative facial palsy had a large and significant effect in univariate analysis (OR 11.82, 95% CI 3.07-45.44, $p < 0.01$). Multivariate logistic regression identified recurrent operation (OR 4.45, 95% CI 1.49-13.30, $p = 0.01$) and other preoperative cranial nerve palsy (CNP; OR 3.01, 95% CI 1.24-7.29, $p = 0.02$) as significant risk factors for postoperative facial weakness.

Facial palsy is a risk during surgical resection of pediatric posterior fossa tumors. The study results suggest that the incidence of new postoperative facial palsy can be as high as 20%. The presence of preoperative facial palsy, an operation for recurrent tumor, and the presence of other preoperative cranial nerve palsy (CNPs) were found to be significant risk factors for postoperative facial weakness [2]

A retrospective study was conducted (from January 2013 to October 2019) at 2 pediatric referral centers, Children's Hospital of Philadelphia, United States, and Great Ormond Street Hospital, United Kingdom. Inclusion criteria were younger than 18 years of age and histologically and molecularly confirmed posterior fossa tumors. Subjects with no available preoperative MR imaging and tumors located primarily in the brain stem were excluded. Imaging characteristics of the tumors were evaluated following a predesigned, step-by-step flow chart. Agreement between readers was tested with the Cohen κ, and each diagnosis was analyzed for accuracy.

Results: A total of 148 cases were included, with a median age of 3.4 years (interquartile range, 2.1-6.1 years), and a male/female ratio of 1.24. The predesigned flow chart facilitated identification of pilocytic astrocytoma, ependymoma, and medulloblastoma sonic hedgehog tumors with high sensitivity and specificity. On the basis of the results, the flow chart was adjusted so that it would also

be able to better discriminate atypical teratoid/rhabdoid tumors and medulloblastoma groups 3 or 4 (sensitivity = 75%-79%; specificity = 92%-99%). Moreover, our adjusted flow chart was useful in ruling out ependymoma, pilocytic astrocytomas, and medulloblastoma sonic hedgehog tumors.

Conclusions: The modified flow chart offers a structured tool to aid in the adjunct diagnosis of pediatric posterior fossa tumors. Our results also establish a useful starting point for prospective clinical studies and for the development of automated algorithms, which may provide precise and adequate diagnostic tools for these tumors in clinical practice [3)].

1)

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