always possible but have to be the goal. Complementary treatments are useful in cases of partial removal and aggressive tumors.

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Special Topic: Neuro-Oncology

Surgical Treatment of Pediatric Brainstem Glial Tumors: A Single-Centre Ten Year Experience

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OBJECTIVE:To determine the extent of resection, immediate results and long-term outcomes after surgical treatment of pediatric brainstem tumors.
MATERIAL-METHODS:28 children with brainstem glial tumors operated in Regional Centre of Neurosurgery and Neurology from January, 2008 till December, 2017 were retrospectively analyzed. 16 (57.1%) patients were male, and 12 (42.9%) – female. Mean age of the patients was 9 years (from 2 to 16). In 15 cases (53.6%) tumor had exophytic growth pattern (11 - into fourth ventricle, 3 - into cerebello-pontine angle, 1 - into third ventricle) and in 13 patients (46.4%) the lesion was purely intrinsic (midbrain – 5, pons – 5, medulla oblongata – 3). Patients were examined neurologically on admission and on discharge. The extent of tumor resection was evaluated on early postoperative MRI (first 48 hours). Overall survival was assessed in patients with high-grade tumors. Children with low-grade tumors were examined on last follow-up according to KPS.
RESULTS:In 16 cases (57.1%) gross total resection was achieved, in 4 patients (14.3%) the resection was near-total, 4 children (14.3%) undergone subtotal resection, partial resection and CSF diversion only was performed in 2 cases each (7.1%). 8 patients (28.6%) deteriorated neurologically after surgery on discharge from the hospital, 19 patients (67.9%) improved or remained stable. One of the operated patients died (3.6%). The median overall survival in patients with high-grade gliomas (n=9, 32.1%) was 15.9 months. In group of patients with low-grade gliomas (n=19, 67.9%) mean follow-up is 43.9 months with a mean KPS of 88.1 (from 70 to 100).
CONCLUSION:Surgical treatment of pediatric brainstem glial tumors can be performed effectively (GTR + NTR in 71.4%) and relatively safe (short-term deterioration – 28.6%, postoperative mortality – 3.6%). Long-term outcome is excellent in patients with low-grade gliomas (mean KPS - 88.1, mortality - 0).

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Special Topic: Vascular

Management of Vein of Galen Aneurysmal Malformation - An Institutional Experience

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OBJECTIVE:Vein of Galen aneurysmal malformation (VGAM) is a rare, developmental intracranial vascular malformation. We intend to analyse the clinical presentations, imaging findings, angio-architecture, management options and outcome in our demographically heterogeneous set of VGAM patients.
MATERIAL-METHODS:We retrospectively analysed cases of VGAM from our Departmental archive, collected during 1988 to January, 2018. Demographic, clinical, therapeutic and follow up details were obtained for each patient from the available records.
RESULTS:We identified 41 patients of VGAM including 6 neonates, 19 infants, 11 children of 2-11 years, and 5 adults. Macrocrania was the commonest presenting feature. Type of fistulae was mural in 17 and choroidal in 20 patients while 4 had thrombosed sac at presentation. In five cases dilated venous sac had connection with the deep venous system. Bilateral jugular atresia and stenosis were seen in 10 and 6 patients respectively. Giant venous sac (>4 cm) was significantly correlated with mural type (P=0.0001). Dural arterial recruitment was seen in 4 including 3 adults. Among the 28 patients treated by endovascular means 18 had good outcome, 5 had poor outcome and 5 died. Significant correlation was noted between jugular atresia and poor outcome (P=0.003).
CONCLUSION:We encountered a wide range of demographic, clinical and angiographic features in VGAM. Mural type malformations were associated with giant venous sacs. Good outcome after embolization was seen in select neonates and in most of the infants, children and adults. Jugular atresia was significantly associated with poor outcome.

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Special Topic: Neuro-Oncology

Management of giant Supratentorial tumors in Children less than 3-years – A Sisyphean task?

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