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Large supratentorial ependymoma in a four month old infant

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Introduction: Brain tumors in the first year of life are rare, more common supra- than infratentorial and frequently extremely large and very good vascularised with insidious clinical presentation and challenging surgical treatment.

Objective: To report case of successfully surgically treated extremely large supratentorial tumor in the four months old female infant.

Method: The tumor was discovered at a regular physical examination; retrospectively 4 or 5 days earlier as the mother recalls the infant couldn't hold her head normally and had vomited on a few occasions. At the examination, the anterior fontanelle was tens, veins of the scalp were stretched and swollen, the head circumference measured 40 cm. After trans-fontanelle ultrasound MRI showed a large good delineated highly vascular contrast enhancing supratentorial tumor measuring 10x6,2x7,4 cm situated in the TPO region, subfalcine herniation (11 mm) with hydrocephalus. External ventricular drainage was placed in the general anesthesia and the infant was prepared for the next day surgery. The tumor was approached through large TPO osteoplastic craniotomy designed exactly according to tumor mass. Tumor was surrounded, devascularised, preserving MCA, ChAA and PCA diminished with ultrasound aspirator and completely removed. The surgery and postoperative course were uneventful. Postoperative native and contrast MSCT showed complete tumor removal without MSCT visible remnants. Histological and imunohistochemical analysis showed anaplastic ependymoma WHO G III, and two weeks after surgery the infant was transferred to oncology for chemotherapy.

Conclusion: The brain tumors in the first year of life are rare with insidious clinical presentation and in rule very large. Surgery with the aim of complete removal is the treatment of choice. In the removal of these large tumors in small infants the surgical strategy of tumor surrounding, with excluding of tumor vessels and preserving surrounding brain vessels, and ultrasound tumor diminishing are helpful. Postsurgical treatment depends on tumor histology.