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AVM in children. Our experience with a series of 48 patients

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Introduction: Despite multiple treatment modalities (embolization, surgery or radiosurgery) the effective combination to treat a child with AVM is still debated. We retrospectively reviewed a series of 48 children treated in the last 20 years in our unit.

Methods: Forty-eight patients (29M and 17F) with an average of 11.6 years old were operated between January 1990 and February 2011 with a minimum follow-up of one year. Criteria of evaluation were the post-operative neurological status improvement (according to the MRC scale and the Rankin score) and the degree of exeresis on the post-operative delayed angiography. All but 4 patients (epilepsy) presented with headaches. Neurological deficits were present in 17 patients and epilepsy in 10. Thirteen patients were in coma when the treatment started. Hemorrhage was the initial feature in 43 patients: in 20 with intraventricular inundation. All patients were patients with an angiography. Sixteen patients were operated in emergency. Four patients were benefitted of pre-surgery embolization before 2000 and 12 in the last 10 years.

Results: Two patients died after surgery but they were operated in a critical state. Forty-two patients benefited from complete surgery treatment documented by arteriography. Four patients needed further radiosurgery for residual lesions. Six patients presented with residual motor deficits. Normal schooling was possible in 40 patients.

Conclusion: Our strategy for treatment of AVM in the last years is not really changed in pediatric population. We think that the best treatment is embolization closely followed by microsurgical removal.