

Endo And Microvascular Approach To Cervical Perimedullary Arteriovenous Fistula Of A 12-Year Old Boy: A Case Report

Dr. Kanij Fatema Ishrat Zahan¹, M Shafiqul Islam¹, M Sumon Rana¹, Mst Shamima Sultana¹, M Farhad Ahmed¹, Asit Chandra Sarker¹

¹Department Of Neurosurgery/ Dhaka Medical College & Hospital, Dhaka, Bangladesh

Introduction:

Spinal cord perimedullary arteriovenous fistula (PMAVF) are rare and belong to type IV spinal cord AVMs. This can occur at any age but more in children, which is high flow and present with bleeding. In adult PMAVF is small and slow flow. PMAVF can be treated by embolization or surgery or in combination.

Report :

Our case a 12-year old boy presented with sudden onset quadriplegia with respiratory difficulty. After resuscitation and use of intravenous methylprednisolone, his left sided weakness with respiratory difficulty improved; but movement of his right chest was zero. MRI cervical spine was done, that revealed multiple void in dorsal and ventral aspect with hemorrhage in C3 portion of the cord. DSA done, which revealed PMAVF at C2 level, fed by ASA (left sulcal branch); venous drainage was done through anterior perimedullary as well as transmedullary veins. In the dorsal cord there is one more fistula fed by radiculomedullary branch of a segmental artery arising from V3 segment of Rt. Vertebral artery.

First stage endovascular glue occlusion of the ventral shunt was achieved. Follow-up MRI revealed non-visualization of ventral flow voids. In second stage we excised the lesion along with the haematoma and venous ectasia. Patient is almost independent on 2 months follow-up. Follow up MRI also shows no voids and cord returned to normal contour.

Conclusion:

Though cervical perimedullary fistula can be treated either by endovascular or microvascular means, we have approached in both ways.