Reversible brainstem edema in vascular malformations within the foramen magnum and upper cervical canal

The authors have nothing to declare.

R. Firsching, J. Kohl, M. Skalej*, Universitätsklinik für Neurochirurgie
*Institut für Neuroradiologie
Universitätsklinikum Magdeburg
Germany
K.H.-D., 1406/13, male 67y. neck pain, weakness of all extremities, wheelchair. Initial diagnosis: edema due to narrow cervical canal. Enlarged vessels (arrow) gave rise to suspect a vascular lesion.
Arterial fistula (arrow) entering the spinal canal between right condyle and C1 arch.
Arterial fistula (arrow) on contrast enhanced magnetic resonance imaging.
Suboccipital approach with removal of C1 arch. Arterial fistula on the right (arrow).
Veins turned to a purple colour after clipping of the fistula.
MRI postoperative with clip artefact

X-Ray postoperative

clip
MRI preoperative

MRI after 3 months. Ability to walk completely recovered.
H. K.-H., 76 year old, acute weakness of legs for 4 months, wheelchairbound
Preserved somatosensory evoked potentials throughout temporary clipping
MRI before operation

MRI follow up after 3 months
1635/16 male, 60 y

20 years ago acute multiple sclerosis, no progression of symptoms for 18 years.

Here the longknown sequelae from multiple sclerosis. For more than a year the loss of motor function of legs and arms and respiratory distress were erroneously attributed to a new bout of the well known multiple sclerosis.
60 y male,
increasing weakness of legs for 20 years,
now severe tetraparesis.
Wheel chair bound.
Arterial fistula (arrow)
After removal of fistula  

Before operation
Suboccipital left approach.
After coagulation and removal of the arterial tentorial fistula above the meatus acusticus internus.
Postoperative MRI 3 months after operation with partial recovery of legs and complete recovery of arms and respiration.
Thank you for your attention!