fistulas without additional embolization can be enough to reduce a fistula significantly.

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**ENDOVASCULAR TREATMENT OF BRAIN ARTERIOVENOUS MALFORMATIONS USING PRECIPITATING HYDROPHOBIC INJECTABLE LIQUID (PHIL)**

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Introduction Application of liquid embolic agents (LEAs) is a method of choice for endovascular treatment of cerebral arteriovenous malformations (AVMs). Nonadhesive agents (Onyx® Medtronic, USA; Squid®Balt, France) are preferred. Thanks to the precipitating hydrophobic injectable liquid (Phil®Microvention, USA) and its several advantages has been popular endovascular solution.

Materials and methods We have treated 787 patients with cerebral AVMs. 41(5,2%) of patients were treated using only the PHIL agent, in 29 (70,7%) the treatment was finalized and 12 (29,3%) have further treatment. The results of 29 patients are considered in this paper.

Results Radical occlusion was achieved in 17 (58,6%) patients. A one-stage procedure was performed in 14 (48,3%) patients, a two-stage in 3 (10,35%) of them. Subtotal thrombosing was achieved in 7 (24,1%) patients and later were surgically removed. 5 (17,2%) patients underwent radiosurgical treatment after subtotal occlusion.

A perioperative hemorrhage was registered in 1 patient. Sufficient ischemic complications were observed in 1 patient. The clinical outcomes corresponded to mRS 0–1 (96,6%). A rough neurological deficit in the postoperative period was noted in 1 patient (3,45%). In the series were no cases of mortality.

Conclusion Using PHIL as the only LEA during endovascular treatment of AVMs enables one to obtain good angiographic and clinical results. Application of this agent provides high primary and secondary success rates, which significantly decreases complication risks and radiation exposure. Considering there are no big observation series and multicenter studies for this agent, it requires further research.

REFERENCES


Do you have any conflict of interest to declare?: No

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**BOW HUNTER’S SYNDROME DUE TO KIMMERLE ANOMALY: A RARE CAUSE OF TRANSIENT VERTEBOBASILAR INSUFFICIENCY DIAGNOSED WITH PROVOCATIVE DSA**

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Background Rotational occlusion of the vertebral artery known as Bow hunter’s syndrome (BHS) is a rare cause of transient vertebrobasilar insufficiency symptoms. The underlying pathology is dynamic stenosis or compression of the VA by abnormal bony structures with neck rotation or extension in many cases, such as osteophyte, disc herniation, cervical spondylosis, tendinous bands or tumours. Complete or incomplete osification of the posterior atlantooccipital membrane forming a bony ridge between the superoposterior lateral mass of the atlas and its posterior arch is called the Kimerle anomaly. To our knowledge, this is the first reported case of BHS caused by the Kimerle anomaly proved with provocative DSA and CT scan for a patient with long-standing transient vertebrobasilar insufficiency on vestibular sedatives.

Objective To report a rare case of a fifty-one-year-old driver who presented with transient giddiness only on reversing his car with rightward head rotation diagnosed with provocative digital subtraction angiography (DSA).

Materials and methods Clinical history and unique advanced imaging findings are reported.

Results Provocative DSA revealed dynamic stenosis of the left vertebral artery at C1 vertebral level. CT angiogram revealed ponticulus posticus or Kimerle anomaly occurring due to calcification of the posterior atlanto-occipital (PAO) membrane and treatments with surgical correction were advised. A high index of clinical suspicion helps in prompt diagnosis of BHS in patients with transient vertebrobasilar insufficiency.

Conclusion This case highlights the importance of provocative DSA in making the definitive diagnosis of BHS and also reports its causal association with calcified PAO membrane or Kimerle anomaly.

REFERENCES


Do you have any conflict of interest to declare?: No