Medullar protection in endovascular surgery of thoracoabdominal aorta

Viader Barraca, I., Vallejo Tarrat, A., Artigas Soler, A., Rosas, M., Hernández, C., Masó, A.

BACKGROUND

The **drainage CSF** as a protective medullar measure in the aortic vascular surgery has shown a **reduction in the incidence of medullar ischaemia** increasing the medullar perfusion by decreasing intrathecal pressure.

CASE REPORT

A 68-year-old male patient, with an asymptomatic thoracoabdominal aneurism

Surgery 1

- Programmed **endovascular repair by a fenestrated endograft**
- No focal neurological deficiencies at the end of the surgery
- In the recovery room the patient complained about a **motor weakness in the lower extremities**

Surgery 2

- High suspicion of **medullar ischaemia**→ an **intradural catheter is used to drain CSF**
- **Total resolution** of the neurologic symptoms

Surgery 3

- Days after, he complained of progressive interscapular pain
- Angio TC: **aortic dissection type B with extension until the proximal end of the aortic endograft**
- **Differed stent-graft placement**
- Before the surgery a **lumbar catheter to drain CSF** is placed
- Postoperative period without complications

DISCUSSION

Spinal chord injury is uncommon after FEVAR. The role of prophylactic CSF drainage is difficult to establish from the available literature.

The indications of CSF drainage includes:

- **patients with previous aortic endovascular surgery**
- **subclavic occlusion**
- **hypogastric occlusion**
- **long endograft extension.**

Our patient had no criteria to place a prophylactic catheter in the first surgery, but due to the neurological complications it was used as a rescue mesure.

LEARNING POINTS

Although the role of CSF drainage as a medullar protection is not established as a gold standard in thoracoabdominal endovascular surgery, its application in selected cases can be very useful, being one of the **fundamental pillars in the prevention and treatment of medullar ischaemia**.

-Early experience with automatic pressure-controlled cerebrospinal fluid drainage during thoracic endovascular aortic repair, Kotelis D, Bianchini C, Kovacs B, Müller T, Bischoff M, Böckler . J Endovasc Ther. 2015 Jun; 22 (3): 368-72
- Intraoperative neuroprotective interventions prevent spinal cord ischemia and injury in thoracic endovascular aortic repair. Ascher C, Acher CW, Marks E, Wynn M. J Vasc Surg. 2016 Jun; 63 (6): 1458-65.