Cavernous Sinus Dural Arteriovenous Fistula Endovascular Treatment

Endovascular treatment is the treatment of choice [1].

According to the recent literature, transvenous embolization via the IPS is considered the most effective method for EVT of CS-DAVFs. In addition, the transorbital approach is another reasonable choice. Other venous approaches can also be tried. Because of the low cure rate, transarterial embolization for CS-DAVFs is limited to only highly selected patients. In the EVT of CS-DAVFs, various agents have been used, including coil, Onyx, and n-butyl cyanoacrylate, with coil being the preferred one. In addition, when EVT cannot obliterate the CS-DAVF, stereotactic radiotherapy may be considered. In general, despite various complications, EVT is a feasible and effective method to manage CS-DAVFs by way of various access routes and can yield a good prognosis [2].

Carotid cavernous fistula transvenous embolization

see Carotid cavernous fistula transvenous embolization.

Complications

Abducens nerve palsy is the most common complication after transvenous embolization (TVE) for cavernous sinus dural arteriovenous fistula. Abducens nerve palsy is reported to have a good prognosis after the symptoms have been alleviated. The purpose of this study was to identify cases of delayed abducens nerve palsy after successful TVE and discuss the physiological mechanisms responsible for this unusual complication.

Between 1991 and 2012, TVE was performed for 73 patients. The patients were evaluated for clinical symptoms every 12 months during the follow-up period. Patients' data and information about abducens nerve palsy were obtained from clinical records retrospectively.

Abducens nerve palsy newly developed in 4 (5.5%) of 73 patients at 3-65 months after TVE. All four patients with delayed abducens nerve palsy were followed up for 8-84 months. However, delayed abducens nerve palsy persisted in all four patients. In these four patients, the shunt points were posterior cavernous sinus. The average coil length used for four patients was 206.5 ± 43.1 cm (n = 4), and the average coil length used for patients without delayed abducens nerve palsy was 112.8 ± 38.8 cm (n = 69).

The possibility of delayed abducens nerve palsy should be kept in mind, especially in the patients who were treated with transvenous coil packing in the posterior part of the cavernous sinus. Furthermore, our results suggest that long-term follow-up care is important for these patients, even after complete neurological and radiological recovery was attained [3].

Case reports

A 75-year-old male who presented with right eye symptoms. He was treated with embolisation using trans-radial artery access for angiographic runs and a median cubital vein access navigating into the cavernous sinus for coil deployment. This technique completely avoids the conventional technique of a femoral approach and confines all access to the arm. Therefore, there are less risks and complications associated with an arm access, improves patients' comfort and mobility post procedure. Transradial artery and cubital vein access allows for a safe and convenient alternative technique using the arm as compared with conventional transfemoral approach for treatment of CS-DAVF [4].

1)
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