

## **Embolization of Spinal Dural Arteriovenous Fistulae: Clinical Outcomes and Long-Term Follow-Up: A Multicenter Study**

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**Abstract :** The most frequent treatable vascular abnormality of the spinal canal is spinal dural arteriovenous fistulae (SDAVFs), which cause progressive para- or quadriplegia mostly affecting elderly males. SDAVFs are present in the thoracolumbar region. The main goal of treatment must be to obliterate the shunting zone via superselective embolization with the usage of a liquid embolic agent. This study aims to evaluate endovascular technique as a safe and efficient approach for the treatment SDAVFs, especially with long-term follow-up clinical outcomes. Study Design: A retrospective clinical case study. From May 2010 to May 2017, 15 patients who had symptoms attributed to SDAVFs underwent the operation in the Departments of Neurosurgery in Suhag, Tanta, and Al-Azhar Universities and Interventional Radiology, Ain Shams University. All the patients had varying degrees of progressive spastic paraparesis with and without sphincteric disturbances. Endovascular embolization was used in all cases. Fourteen were males, with ages ranging from 45 to 74 years old. After the treatment, good outcome was found in five patients (33.3%), a moderate outcome was delineated in six patients (40 %), and four patients revealed a poor outcome (26.7%). Spinal AVF could be treated safely and effectively by the endovascular approach. Generally, there is no correlation between the disappearance of MRI abnormalities and significant clinical improvement. The preclinical state of the patient is directly proportional to the clinical outcome. Due to unexpected responses, embolization should be attempted even the patient is in a bad clinical condition.

**Keywords :** spine, arteriovenous, fistula, endovascular, embolization

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