



## Preventing paralysis in a middle aged man – successful endovascular treatment of spinal dural arteriovenous fistula

### DIVISION OF INTERVENTIONAL NEURORADIOLOGY

*Presents a patient case treated by the team members of the division and physicians and staff of the UCLA Comprehensive Stroke Center*

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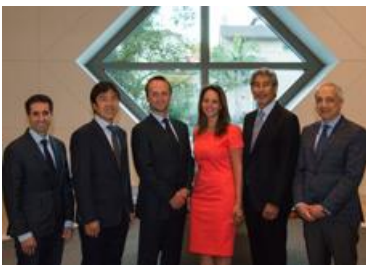
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### PATIENT PRESENTATION

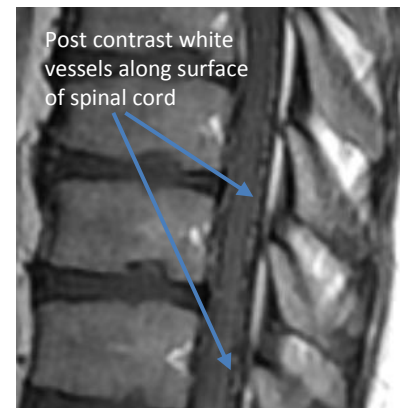
- Middle aged man presented with several month history of an unusual sensation in the legs with cramping that progressed to numbness and an itchy sensation. He also had low back pain, urinary urgency, and constipation.

### EVALUATION AND IMAGING

- An MRI was ordered (image 1) which shows spinal cord edema and (image 2) which is post contrast and shows what looks like vessels along the cord.
- This appearance is consistent with a spinal dural arteriovenous fistula.



**Image 1:** Sagittal T2WI MRI shows normal dark appearing spinal cord (blue arrow) and whiter lower spinal cord (red arrow) consistent with swelling of



**Image 2:** post contrast sagittal T1WI MRI shows enhancing vessels along surface of spinal cord (blue arrows)



**INTERVENTION PERFORMED**

- Spinal angiogram, selective right T10 injection revealed abnormally early filling veins consistent with spinal dural fistula (Image 3).
- nBCA glue material was successfully injected to occlude the arterial branch feeding the fistula site (Image 4, 5).

**Procedures provided by DINR for adult and pediatric patients**

Acute Ischemic Stroke

- Acute Thrombectomy/Thrombolysis
- Extra/Intracranial Angioplasty/Stenting

Brain Hemorrhage, Aneurysm/AVM/fistulae

- Aneurysm coiling
- Stent/balloon assisted aneurysm coiling
- Flow diverter stent device embolization
- AVM/Dural fistulae embolization
- Venous Sinus Thrombectomy/Thrombolysis
- Direct transcatheter embolization

Chronic Occlusive Cerebrovascular Disease

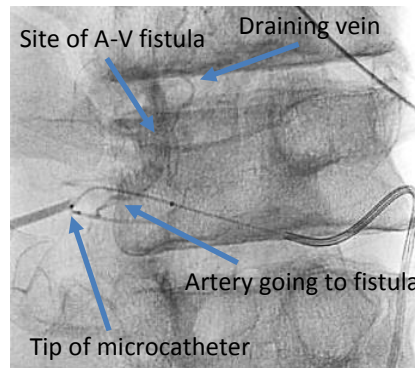
- Extra/Intracranial Angioplasty/Stenting
- Venous Sinus Angioplasty/Stenting

Head/neck/orbit tumors & vascular malformations, epistaxis

- Endovascular embolization
- Direct percutaneous embolization



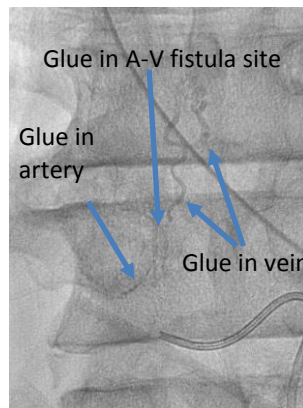
**Image 3:** Left T10 selective angiogram and abnormally early filling veins (arrows) consistent with spinal dural fistula



**Image 4:** The microcatheter being positioned into the branch (arrows) that abnormally fills the vein early.

**THE OUTCOME**

- Embolization was completed successfully with the outcome shown in Image 5 and 6.
- The patient was discharged home after the procedure and is now having improvement in neurological function.



**Image 5:** post embolization glue cast across fistula from artery to vein.  
**Image 6:** post angiogram shows fistula is gone.



**Division of Interventional Neuroradiology – A Leader in Neurovascular Care and Research**

- Invented the Merci retriever – the 1<sup>st</sup> endovascular device for acute stroke therapy
- Invented GDC and Matrix coils – the leading tool for aneurysm treatment around the world
- Developed Onyx liquid embolic material – the leading therapy for brain vascular malformations



**American Heart Association  
American Stroke Association  
CERTIFICATION**  
Meets standards for  
**Comprehensive Stroke Center**

