# Endovascular embolization

- Piccolo Device for Treating Patent Ductus Arteriosus Beyond Premature Newborn Patients, a Novel Experience in South America: A Retrospective Study
- Endovascular carotid artery revascularization utilizing multiple distal embolic protection strategies: active and passive flow reversal in combination with balloon assisted reperfusion
- Parent Artery Occlusion Using Multiple Short iED Coils and n-Butyl Cyanoacrylate via a Marathon Microcatheter for a Dissecting Aneurysm of the Distal Posterior Inferior Cerebellar Artery With Severe Flexion of the Caudal Loop: A Case Report
- Management and Follow-Up of a Traumatic Vertebral Artery Pseudoaneurysm: A Case Report on Pipeline Embolization and Recovery
- Combined Corticosteroid and Minoxidil Therapy for Early Recovery in Radiation-Induced Alopecia: A Case Report
- Jugular foramen dural arteriovenous fistula: A case report and literature review
- Management and outcomes for thoracic anterior spinal artery aneurysms: illustrative case
- Upside-Down Deployment of the Minos Iliac Limb as a Simple Off-the-Shelf Solution to Overcome Anatomical Limits

(Endovascular access) is a minimally invasive technique performed to cut off the blood supply to a specific part of an artery.

Embolization is a minimally invasive surgery. The purpose is to prevent blood flow to an area of the body, which can effectively shrink a tumor or block an aneurysm.

The procedure is carried out as an endovascular procedure by a consultant radiologist in an interventional suite. It is common for most patients to have the treatment carried out with little or no sedation, although this depends largely on the organ to be embolized. Patients who undergo cerebral embolization or portal vein embolization are usually given a general anesthetic.

Access to the organ in question is acquired by means of a guidewire and catheter(s). Depending on the organ this can be very difficult and time-consuming. The position of the correct artery or vein supplying the pathology in question is located by digital subtraction angiography (DSA). These images are then used as a map for the radiologist to gain access to the correct vessel by selecting an appropriate catheter and or wire, depending on the 'shape' of the surrounding anatomy.

Once in place, the treatment can begin.

Once the artificial emboli have been successfully introduced, another set of DSA images is taken to confirm a successful deployment.

## Indications

Minimally invasive endovascular embolization is used to treat a wide range of diseases in neurology, oncology, and trauma where the vascular morphologies and corresponding hemodynamics vary greatly.

# Complications

Current techniques based on metallic coils, flow diverters, liquid embolic, and suspended microspheres are limited in their ability to address a wide variety of vasculature and can be plagued by complications including distal migration, compaction, and inappropriate vascular remodeling. Further, these endovascular devices currently offer limited therapeutic functions beyond flow control such as drug delivery.

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Retained microcatheter after endovascular embolization of brain vascular malformation lesions poses serious risks. Long-term complications have been sparsely described in the literature.

Material and methods: We report a rare complication of limb ischemia following the complete migration of a retained microcatheter. The literature review was performed using the mesh terms “complications,” “endovascular interventions,” “retained catheter,” and “Onyx” on PubMed.

Result: The patient had undergone embolization of dural AV fistula (DAVF) at the craniovertebral junction (CVJ) 5 years before presentation using ethylene vinyl alcohol (Onyx). He presented with acute right lower limb ischemia. Emergency endovascular removal of the catheter and thrombus aspiration were done.

Conclusion: Migrated catheters confined within vascular lumen can be effectively treated by an endovascular approach. Patient education about complications may help in seeking medical care for timely intervention [1)].

# Coil embolization

see Coil embolization

see Flow diverter

see Transvenous embolization

see Preoperative embolization

see preoperative Tumor embolization.

# Intracranial aneurysm embolization

see Intracranial aneurysm embolization.

# Cerebral arteriovenous malformation embolization

see Cerebral arteriovenous malformation embolization.

# Middle meningeal artery embolization for chronic subdural hematoma

Middle meningeal artery embolization for chronic subdural hematoma.

# Embolization agents

see Embolization agents.

1)
Mundhe VM, Singh R, Singh N, Karapurkar A, Warawdekar G, Deshmukh N, Reddy J. Delayed Complication of a Retained Microcatheter during Neurovascular Intervention Presenting as Limb Ischemia: A Case Report and Literature Review. Neurol India. 2023 Jan-Feb;71(1):135-139. doi: 10.4103/0028-3886.370460. PMID: 36861588.