

## Advancements in Imaging on Distal Posterior Cerebral Artery Aneurysm Treatment

Payal Patel\*

Department of Health Science and Radiology, University of Botswana, Botswana

### Image Article

Aneurysms are abnormal bulges or sac-like formations that occur in weakened arterial walls. When such an aneurysm develops in the distal posterior cerebral artery (PCA), it presents a unique challenge due to the sensitive location and intricate network of blood vessels in the brain. However, advancements in medical technology and surgical techniques have significantly improved the treatment options for distal PCA aneurysms, providing hope for patients and healthcare professionals alike. In this article, we will explore the latest treatments and approaches for managing distal PCA aneurysms [1].

### Understanding distal PCA aneurysms

The posterior cerebral artery (PCA) is a crucial part of the brain's circulatory system, supplying blood to the posterior aspects of the brain, including the occipital lobe, thalamus, and midbrain. Aneurysms in this region can lead to life-threatening complications such as subarachnoid hemorrhage (SAH), stroke, or neurological deficits. Distal PCA aneurysms are relatively rare but demand careful evaluation and prompt intervention [2].

### Treatment options

**Endovascular coiling:** Endovascular coiling, also known as endovascular embolization is a minimally invasive procedure performed by an interventional neuro-radiologist. During this procedure, a catheter is guided through the blood vessels from a peripheral access point (typically the femoral artery) to the site of the aneurysm. Small platinum coils or stents are then placed in the aneurysm to promote clotting, ultimately sealing off the aneurysm and preventing rupture. Endovascular coiling is a less invasive option compared to traditional open surgery, making it a preferred choice, especially for distal PCA aneurysms (Figure 1).

**Flow diversion:** Flow diversion is a relatively new endovascular treatment for complex and wide-necked aneurysms. A flow diverter is a flexible stent-like device that is placed across the neck of the aneurysm. It works by diverting blood flow away from the aneurysm

sac, promoting the formation of a stable blood clot inside the aneurysm. Flow diversion has shown promising results in managing challenging distal PCA aneurysms, but its use requires careful patient selection and expertise in the procedure.

**Microsurgical clipping:** Microsurgical clipping has been a traditional and effective treatment for cerebral aneurysms for several decades. In this procedure, a neurosurgeon exposes the aneurysm through a craniotomy (opening in the skull). A tiny metal clip is carefully placed around the neck of the aneurysm to cut off blood flow and prevent rupture. While microsurgical clipping is effective for many distal PCA aneurysms, it is more invasive than endovascular approaches and may carry higher risks, especially in complex cases.

The treatment of distal posterior cerebral artery aneurysms has come a long way, thanks to advancements in medical technology and surgical techniques. With options ranging from minimally invasive endovascular coiling to more traditional microsurgical clipping, patients now have a better chance of successful management and recovery. Additionally, emerging techniques like flow diversion and flow disruption offer exciting prospects for the treatment of complex and challenging distal PCA aneurysms.

### Acknowledgement

None

### Conflict of Interest

None

### References

1. Kobkitsuksakul C, Somboonnitiphon K, Apirakkan M, Lueangapapong P, Chanthanaphak E (2020) Dolichoectasia of the internal carotid artery terminus, posterior communicating artery, and posterior cerebral artery: The embryonic caudal ramus internal carotid segmental vulnerability legacy. *Interv Neuroradiol* 26: 124-130.
2. Hou K, Lv X, Yu J (2022) Endovascular Treatment of Posterior Cerebral Artery Trunk Aneurysm: The Status Quo and Dilemma. *Front Neurol* 12: 746525.

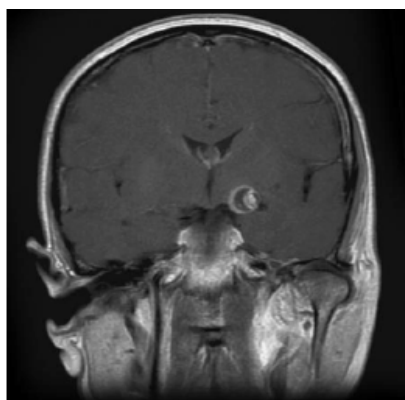


Figure 1: Illustration of a cerebral aneurysm.

\*Corresponding author: Payal Patel, Department of Health Science and Radiology, University of Botswana, Botswana, E-mail: Payal\_p@gmail.com

Received: 06-Jul-2023, Manuscript No. roa-23-107901; Editor assigned: 08-Jul-2023, PreQC No. roa-23-107901 (PQ); Reviewed: 22-Jul-2023, QC No. roa-23-107901; Revised: 24-Jul-2023, Manuscript No. roa-23-107901 (R); Published: 31-Jul-2023, DOI: 10.4172/2167-7964.1000473

Citation: Patel P (2023) Advancements in Imaging on Distal Posterior Cerebral Artery Aneurysm Treatment. *OMICS J Radiol* 12: 473.

Copyright: © 2023 Patel P. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.