

A RARE CASE OF BASILAR TIP ANEURYSM

Liyakat Ali Chowdhury, Sudipta Saha, Samiran Samanta

Department of Radiodiagnosis, Institute of Post-Graduate Medical Education and Research and Seth Sukhlal Karnani Memorial (IPGME&R and SSKM) Hospital, Kolkata, West Bengal, India

PJR April - June 2016; 26(2): 126-128

ABSTRACT

Though basilar tip aneurysms are not common, they are the most common aneurysm of the vertebrobasilar system and can be devastating if they rupture. The resulting subarachnoid hemorrhage can cause a variety of signs and symptoms. They are diagnosed using CT angiogram or MR angiogram. Like other intracranial aneurysms, basilar tip aneurysms may be clipped or coiled.

Key words: Vertebrobasilar, Aneurysm, Subarachnoid haemorrhage

Introduction

Basilar tip aneurysms occurs at the point where basilar artery divides into two posterior cerebral arteries. It account for 5-8% of intracranial aneurysms. Though basilar tip aneurysms are not common, they are the most common aneurysm of the vertebrobasilar system. The surgical treatment of basilar tip aneurysms remains one of the most difficult tasks in neurosurgery because the view is obscured due to the depth of the aneurysm, overlapping neurovascular and bony structures, and the proximity of perforators.

Case Presentation

A 39 years old male patient presented with non-specific persistent headache under evaluation. Clinical examination was unremarkable.

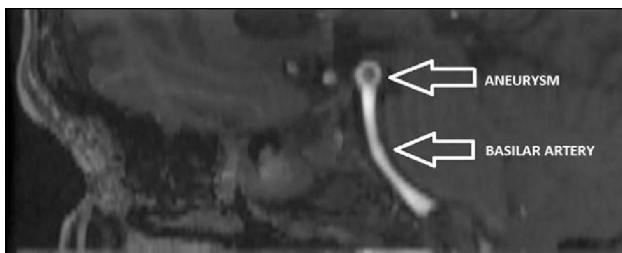


Image 1: SAG reformed image showing basilar tip aneurysm

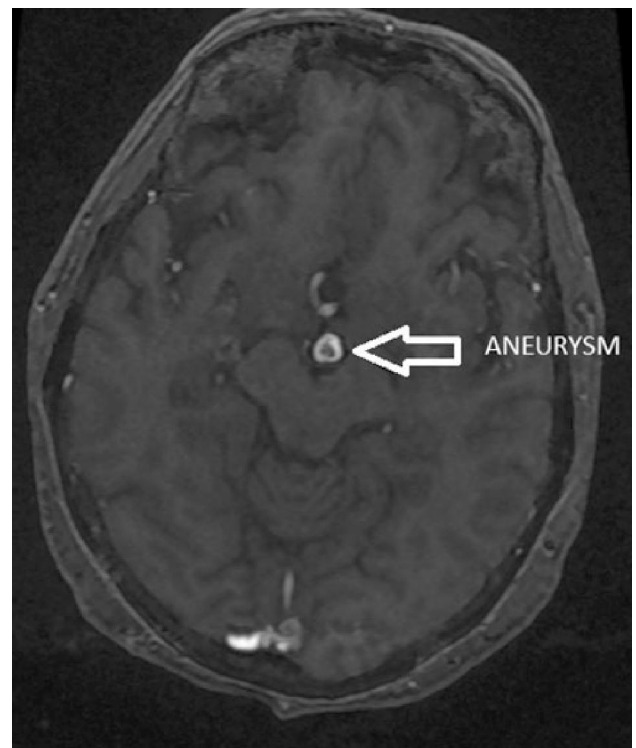


Image 2: AX TOF image showing basilar TIP aneurysm

Correspondence : Dr. Liyakat Ali Chowdhury
Department of Radiology, (IPGME&R and SSKM) Hospital, Kolkata 700020, West Bengal, India.
Mobile: +917699907909
Email: lachowdhuryrd@gmail.com

Submitted 2 August 2015, Accepted 17 August 2015

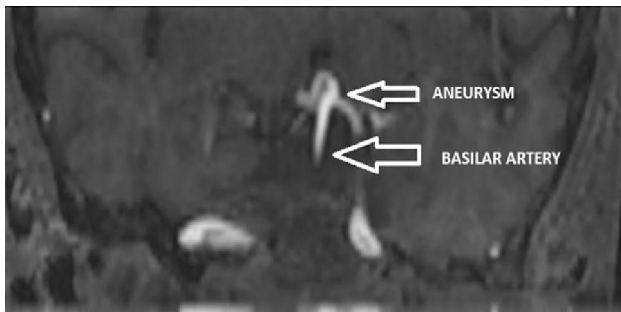


Image 3: Coronal reformed image showing basilar tip aneurysm

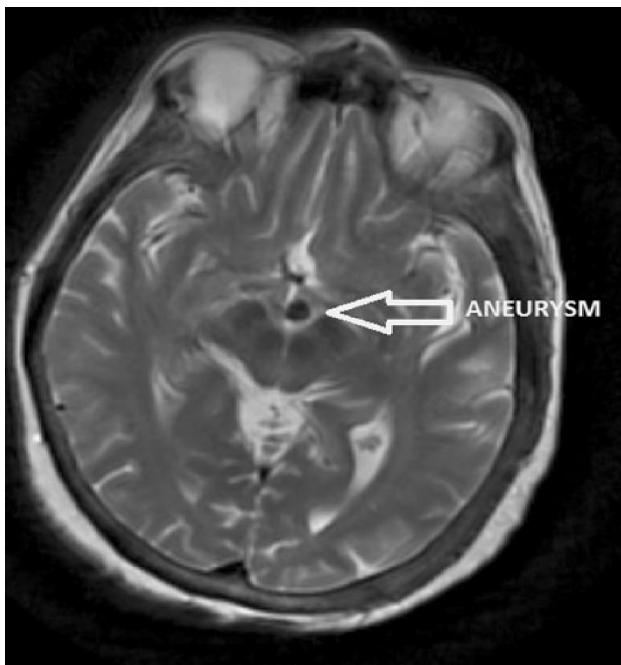


Image 4: AX T2 image showing basilar tip aneurysm

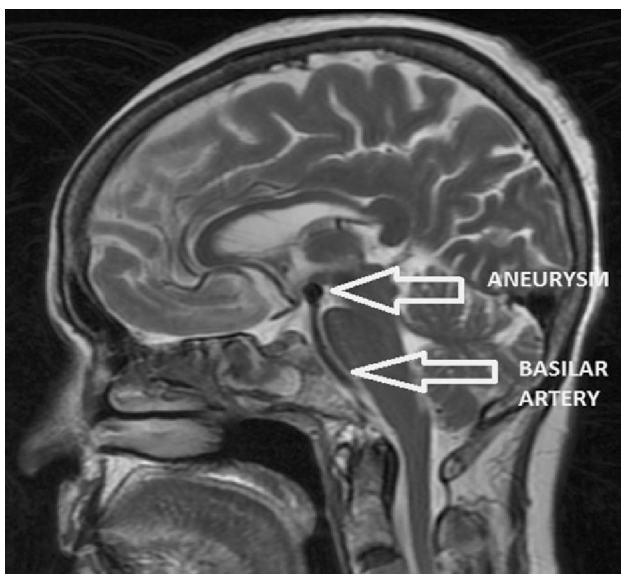


Image 5: SAG T2 image showing basilar tip aneurysm

Discussion

Patients at risk for developing cerebral aneurysms include those with atherosclerosis, those with a family history of intracranial aneurysms, those with a history of hypertension or collagen vascular disease, and those with polycystic kidney disease. Smokers are also at a higher risk of developing aneurysms. Basilar tip aneurysms form when the lining of the vessel wall is thinned. Typically the muscular layer of the wall - the tunica media - is weakened as a result of the aforementioned reasons. This thinning allows turbulent blood flow to form out pouchings in the vessel wall.¹

Basilar artery aneurysms are uncommon, but can be devastating if they rupture. The most common symptoms of a basilar tip aneurysm occur after it ruptures. The resulting subarachnoid hemorrhage can cause a variety of signs and symptoms. The most common being a severe headache, although cranial nerve dysfunction, stroke, coma, and death can also occur.²

Basilar artery bifurcation aneurysms constitute a major surgical challenge, due mainly to their depth within an extremely narrow surgical field, their intimate relationship with thalamoperforating arteries, and the difficulty gaining sufficient exposure of the basilar artery.^{3,4,5}

Like other intracranial aneurysms, basilar tip aneurysms may be clipped or coiled. Clipping of an aneurysm involves an open surgical procedure where the surgeon dissects down to the aneurysm and places a clip across its neck. This effectively excludes it from the circulation and prevents it from rupturing.⁶

Conclusion

Basilar artery aneurysms are uncommon, but can be devastating if they rupture. So earlier detection for management with clipping and/or coiling is of immense importance.

References

1. Brisman JL, Song JK, Newell DW. Cerebral Aneurysms. *NEJM* 2006; **355**: 928-39.
2. Kumar V, Abbas AK, Fausto N. Robbins and Cotran Pathologic Basis of Disease. Seventh Edition. Philadelphia: Elsevier Saunders, 2004.
3. Figueiredo EG, Zabramski JM, Deshmukh P, Crawford NR, Preul MC, Spetzler RF (2006) Anatomical and quantitative description of the transcranial approach to interpeduncular and prepontine cisterns. *J Neurosurg* **104**: 1-8. View Article.
4. Figueiredo EG, Zabramski JM, Deshmukh P, Crawford NR, Spetzler RF, Preul MC (2006) Comparative analysis of anterior petrosotomy and transcranial approaches to retrosellar and upper clival basilar artery aneurysms. *Neurosurgery* **58**: 13-21. View Article
5. Lozier AP, Kim GH, Sciacca RR, Connolly ES Jr, Solomon RA (2004) Microsurgical treatment of basilar apex aneurysms: perioperative and long-term clinical outcome. *Neurosurgery* **54**: 286-99. Pub Med View Article
6. Hunt WE, Hess RM. Surgical Risk as Related to Time of Intervention in the Repair of Intracranial Aneurysms. *Journal of Neurosurgery* 1968; **28**: 14-20.