ABSTRACT

A parafalcine mass can be misdiagnosed with Giant intracranial aneurysm because of lack of specific radiological features. Giant aneurysm are rare comprising of 5 % of all intracranial aneurysm and commonly located on internal carotid artery and middle cerebral artery. A case which we describe, located on left distal anterior cerebral artery, is rare. A 53 old male presented with weakness in right lower limb associated with headache and dysarthria. On examination, Power of rt lower limb was 3/5 with normal vitals. On CT imaging, findings showed midline frontal parafalcine well defined mass with areas of hypodensity which conclude provisional diagnosis of parafalcine meningioma. MRI and CT Angiography was done for further confirmation where report was consistent with parafalcine meningioma. while operating following mid frontal craniotomy, findings are suggestive of thrombosed giant aneurysm arising from left distal anterior cerebral artery. Applying the clip at distal ACA prevented from possible unfortunate incidence and complete excision without complications. The postoperative period was uneventful with no new neurological deficit. This case is shared here as it is a rare kind of lesion which mislead surgeons during surgical intervention. So, clinician must be aware of the thrombosed aneurysm mimicking as intracranial neoplasms as differential diagnosis. It gives good result and patient satisfaction, without any neurological deficits.

CASE REPORT

A parafalcine mass can be misdiagnosed with Giant intracranial aneurysm because of lack of specific radiological features. Giant aneurysm are rare comprising of 5 % of all intracranial aneurysm and commonly located on internal carotid artery and middle cerebral artery. A case which we describe, located on left distal anterior cerebral artery, is rare. A 53 old male presented with weakness in right lower limb associated with headache and dysarthria. On examination, Power of rt lower limb was 3/5 with normal vitals. On CT imaging, findings showed midline frontal parafalcine well defined mass with areas of hypodensity which conclude provisional diagnosis of parafalcine meningioma. MRI and CT Angiography was done for further confirmation where report was consistent with parafalcine meningioma. while operating following mid frontal craniotomy, findings are suggestive of thrombosed giant aneurysm arising from left distal anterior cerebral artery. Applying the clip at distal ACA prevented from possible unfortunate incidence and complete excision without complications. The postoperative period was uneventful with no new neurological deficit. This case is shared here as it is a rare kind of lesion which mislead surgeons during surgical intervention. So, clinician must be aware of the thrombosed aneurysm mimicking as intracranial neoplasms as differential diagnosis. It gives good result and patient satisfaction, without any neurological deficits.
Magnetic resonance imaging (MRI) was also performed which showed fluid filled level on right side of the mass while small area of calcification on the left inferior aspect of mass. Hematoma within the extra-axial mass (Figure 2).

CT cerebral angiography was done which showed hyperdense lesion at the anterior mid falx demonstrating areas of calcification, posteriorly displaced anterior cerebral artery segments and few prominent branches of ACA seen on the anterior part of mass which suggest the diagnosis of cystic meningioma with haemorrhage (Figure 3).

DISCUSSION

Anterior cerebral artery aneurysm is rare among cerebral artery aneurysms accounting for 5-10% of total cerebral artery aneurysm. However, it is important to note that the exact prevalence of ACA aneurysms may vary depending on various factors such as age, sex, and geographical location. Additionally, some ACA aneurysms may remain undiagnosed and asymptomatic, leading to an underestimation of the true prevalence. Three pathogenic events are present in the GIA natural history: spontaneous thrombosis, mass effect from growth, and rupture leading to subarachnoid haemorrhage.

Complete intraluminal thrombosis is rare and commonly seen in case of giant aneurysm. Exact pathology for formation of thrombosis is not known however this condition is hypothesized to be preceded by hemodynamic stress on the aneurysmal wall followed by endothelial damage with predisposing factors including a higher dome: neck ratio, long-standing “aged” aneurysms, blood hypercoagulability etc.

While the diagnosis is mainly done through CT and MRI with typical CT characteristic of thrombosed aneurysm being peripheral ring enhancement, curvilinear mural calcification, intraluminal mixed hyperdense calcification and the presence of “target sign” and MRI showing “onion skin” appearance, luminal flow void, luminal enhancement and peri-aneurysmal edema on T2-weighted sequences. But in our case neither peripheral ring enhancement nor perianeurysmal edema nor onion skin appearance was seen on CT and MRI. CT angiogram showed few prominent branches of ACA on anterior part of mass. Although all radiological examination except DSA were done, due to absence of any typical picture suggesting of aneurysm, a misdiagnosis of cystic meningioma with haemorrhage was made.

Thus because of limitation of imaging and presence of atypical features commonly seen in thrombosed giant aneurysm differential diagnosis of giant intracerebral aneurysm should always be considered and must not be ruled out until the surgery is performed in case of mass presenting with atypical size and at unusual site. While preoperatively DSA may be helpful in visualizing the artery and its morphology, it may be negative in cases of completely thrombosed aneurysm. In our case, while the diagnosis was made intraoperatively careful application of vascular clip prevented unfortunate incident and further complication.

CONCLUSION

This case is shared here as it is a rare kind of lesion which mislead surgeons during surgical intervention. So, clinician must be aware of the thrombosed aneurysm mimicking as intracranial neoplasms as differential diagnosis. It gives good result and patient satisfaction, without any neurological deficits.
REFERENCES:


