Case report

Cirsoid aneurysm-a rare congenital anomaly of arterio-venous malformation

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Background: The aim of the present study is to report a case of arterio venous malformation that was observed in the scalp - Cirsoid aneurysm

Case Study: A. case of cirsoid aneurysm was seen in a male patient aged twenty two years who. came to surgical out patient department with history of headache & a single large pulsatile swelling over left fronto parietal region.. with no history of trauma or infection . Histopathological studies showed arteriovenous aneurysm. Multiple ligation with excision of sac was done. Post operative period was uneventful. This vascular malformation is rare congenital anomaly, This congenital anomaly is of profound clinical importance not only to neurosurgeons but also to vascular surgeons and gastro enterologists hence it was studied and reported..

Key words: Arteriovenous aneurysm, Pulsatile swelling, Cirsoid Aneurysm, Rare congenital anomaly-Vascular Malformation.

Introduction

Aneurysm are the dilatations of localized segment of arterial system. They are of two varieties, namely true aneurysm involving all the three layers and false aneurysm involving only one layer of major arteries like aorta, carotid and smaller arteries like cerebral arteries[1].Cirsoid aneurysms are vascular malformations occurring in the form of arterio venous malformations constituting 3% of intracranial tumors. They are gradual in onset, causing subarachnoid hemorrhage and may throw fits.[2]These swelling appear as pulsatile swelling with tortuous dilated arteries ,veins having communications between them with scalp as a common site.[3] These are also present in the stomach and jejunum which are known to cause gastrointestinal bleeding [4]

Case report

A male patient aged twenty two years presented himself in the surgical outpatient Department at the Sri.R.L.Jalappa Hospital & Research Center of Sri Devraj Urs Medical College, with the history of headache & large pulsatile swelling over the left fronto parietal region. It was gradual in onset.

There was no history of trauma, infection,vomiting seizures, localizing and lateralizing signs nor intracerebral hemorrhage but there was strong family history where his parents and grand parents had suffered from the cirsoid aneurysm..

On local examination

Revealed a single large pulsatile swelling over the left front parietal region which could be completely reducible measuring 5cms x4cms It was ovoid in outline. Skin over the swelling was stretched and shinny with bruit heard on auscultation. Tortuous vessels were seen over the swelling

He was later admitted and thorough investigations were done

a) **Complete haemogram** –was done which was within normal limits
b) **Echography**-was done which was also in the normal limits.

c) **X-Rays were taken in A-P &Lateral view** that showed swelling over the fronto parietal region

d) **Histopathological studies** was done which showed dense fibro collagenous bundles containing thick walled arteries arterioles ,veins intercommunicating between them-**Arterio-venous Aneurysm.** .

e) **Fundoscopic Examination** was done which did not reveal any presence of micro aneurysm.

Surgery was done by multiple ligations of the vessels and excision of sac under general anesthesia-A well defined secular structure measuring 5x4cms with feeding arteries from superficial temporal,supraorbital arteries, and numbers of veins accompanying arteries were ligated Saccular structure was peeled off from overlying scalp and underlying bone easily .

Radiographs were again taken both in A-P and Lateral view showing skin flap with sutures.Patient had good result after surgery.

Discussion

Aneurysm occurring in the brain is known as Cirsoid Aneurysm may give rise to life threatening hemorrhage. Acquired aneurysm are the result of trauma, infection bacterial endocarditis.[5]

Cirsoid Aneurysm is a congenital type of vascular anomaly where dilated intercommunicating arteries and veins are usually found in the scalp. [6]

The commonly affected arteries in the Cirsoid Aneurysm are Superficial temporal arteries and other branches.Bones get thinned out due to pressure resulting in falling of hair and X'ray may show perforations in the skull and these aneurysms are intracranial The most dangerous risk of these aneurysms are hemorrhage following ulcerations [7]

In Kinugasa et al studies, aneurysms were seen affecting internal carotid artery and posterior communicating arteries in two patients,anterior choroidal artey in one patient, bifurcation of basilar artery in one patient ,the middle cerebral arteries in two patients. So in the above six patients there was associated subarachnoid hemorrahage [8]

In Vetto et al studies there were two cases of cirsoid aneurysm found in the proximal jejunum which caused massive bleeding Previusly they have reported similar cirsoid aneurysm in twp patients. that caused hemorrhage. A These patients underwent surgery except one patient died where endoscopy was not reaching the site of bleeding but It was diagnosed only during autopsy[4]

Dieulafoy lesion is a rare cause of gastrointestinal bleeding giving rise to 0.3% to 0.5% associated with haemetemesis(28%) & malena (18%) They are found in stomach & jejunum.& other parts of gastro intestinal tract The ratio of M:F is 2:1 in the elderly aged groups(between 50-60 years.[9]

Present study

A male patient aged twenty two years came with the history of headache and a large single ovoid pulsatile swelling over the left fronto parietal region The swelling was pulsatile and reducible with borders well made out due to bony defects between frontal and parietal bones .The skin was stretched and shinny Bruit was heard on auscultation There was no history of trauma,infections and subarachnoid haemorrhage, there was no history of gastro intestinal bleeding nor any history of haemetemesis & malena, but there was strong family history of similar complaints. In the present case,there were feeding arteries from superficial temporal & supraorbital arteries Surgery was done with multiple ligations of the above involved vessels & along with sac exicisions.Patient had good recovery after surgery.

Conclusion

The above mentioned cirsoid aneurysm is a very rare congenital arterio venous malformation This congenital anomaly is of profound clinical importance not only to neurosurgeons but also to vascular surgeons and to gastro enterologists .because cirsoid aneurysm also occurs in the gastro intestinal tract. Hence it has been studied & reported.

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