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Saccular Aneurysm of Right Internal Carotid Artery in an Adult Cadaver - A Case Report

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Abstract:

An aneurysm is a localized abnormal dilatation of a blood vessel or the heart which could be congenital or acquired, a true one or a false one, a small berry aneurysm or a saccular one or a dissecting one.

Keywords: Aneurysm, Berry, Dissecting, Saccular.

1. Introduction

An aneurysm is a localized abnormal dilatation of a blood vessel, or the heart which could be congenital or acquired, it could be a true one when it involves an intact attenuated arterial wall or ventricular wall of the heart. False aneurysms which involves the vessel wall leads to an extra vascular haematoma which communicates with the intravascular space. An arterial dissection occurs when blood enters its wall. These aneurysms can rupture leading to catastrophic consequences.

According to their shape and size they are classified into berry, saccular or fusiform or dissecting and depending on their etiology as atherosclerotic, traumatic, syphilitic or mycotic.

Aneurysm occurs in the major vessels like aorta, femoral, popliteal, subclavian and carotid arteries. Cerebral vessels are thin walled due to their thin media and hence aneurysms are common.

Here we report a case of saccular aneurysm of right internal carotid artery.

2. Materials and Methods

During routine dissection for I MBBS students we observed a saccular aneurysm of right internal carotid artery in an adult cadaver which was of the size of 2.5cm x 1.5cm in the department of Anatomy, Govt Medical College, Kottayam, India.

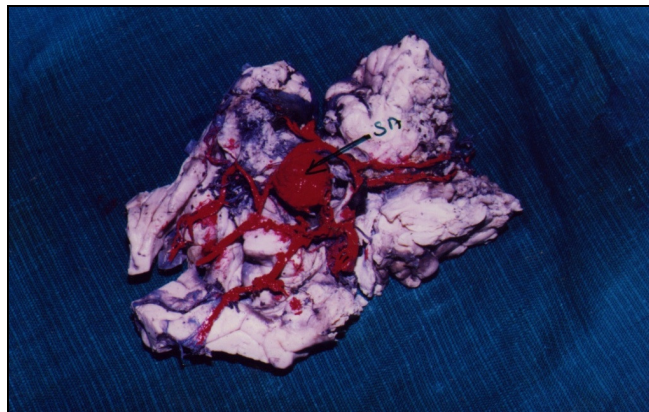


Figure 1: Saccular aneurysm (S.A.) arising from internal carotid artery (ICA)

3. Discussion

A larger saccular aneurysm of the cerebral part of right internal carotid artery was seen in one case which displaced the optic chiasma to the opposite side. All the vessels on the right half of the circle seemed to be enlarged and tortuous.

Jefferson (1937), Bull (1938) and Reshberth (1957) had described that the internal carotid artery aneurysm specially in the intracavernous portion enlarges and may damage the third, fourth and sixth cranial nerves and elevate the dura on the lateral aspect of cavernous sinus, enlarge the sphenoidal fissure, erode the anterior clinoid process and the lateral portion of sella turcica.

Richardson and Hyland (1941) also emphasized the occurrence of intracerebral haemorrhage from aneurysm in the region of cerebral vessels.

Dandy (1944) suggested that aneurysms are more frequent in either sex.

Carmichael (1950) suggested that: -

1. Although aneurysms have been recorded at the extremes of life they most commonly cause death during 5th decade.
2. Almost all saccular aneurysms are at or very close to the point of division of arteries or where two arteries joint to form the Circle of Willis. Here the tunica media is deficient due to degeneration of elastic and is weak. The endothelium and fibrous tissue yield before the pressure of blood so an aneurysm is formed which could be from a size of pin head to about 30mm diameter.

Half of the aneurysms that give rise to symptoms are found after the age of 40 yrs and are frequent in both sexes.

4. Conclusion

This is a case report of a saccular aneurysm of right internal carotid artery in a forty-seven-year-old male. This is clinically important as it could be the cause of death or could enlarge and damage the third, fourth and sixth cranial nerves, or erode the lateral aspect of cavernous sinus, leading to serious complications.

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