

**DEFINITIONS**

1. An **aneurysm** is a sac filled with blood which is in direct communication with the interior of an artery -
  - 1.1. A **true aneurysm** is formed by dilatation of an artery
  - 1.2. A **false aneurysm** is a sac lined by condensed cellular tissue which communicates with the artery through an opening in its wall.
2. Aneurysms may occur on arteries of any size and in any part of the body.
3. Aneurysms may be classified according to their shape -
  - 3.1. **Fusiform** - in which the aneurysm encompasses the entire circumference of the artery.
  - 3.2. **Saccular** - in which only a portion of the circumference of the artery is involved and in which there is a neck and an asymmetric out-pouching of the aneurysm.
  - 3.3. **Dissecting** - in which a tear in the inner lining of the artery permits blood to dissect along the middle coat of the vessel. Such an aneurysm may be called a **dissecting haematoma**.

**CLINICAL MANIFESTATIONS**

4. These depend upon the site of the aneurysm. Aneurysms are often filled with thrombus which may then become a source for emboli. They may cause symptoms, including pain, because of pressure upon adjacent structures. They may rupture, thus giving rise to haemorrhage. They may be apparent, visually, as pulsatile swellings.
5. An aneurysm may be symptomless and only discovered as an incidental finding in the course of other investigations.

**AETIOLOGY**

6. The force which expands an aneurysm is the blood pressure but, for an aneurysm to form, there must be an arterial lesion which weakens the wall. Increased arterial blood pressure - **hypertension** - makes aneurysm formation more likely in the presence of such a weakness.
7. An aetiological classification of aneurysms is as follows, the cause of the arterial weakness in each case being that of the underlying condition -
  - 7.1. **Congenital**, such as the "berry aneurysm" in the cerebral arterial circulation, the weakness being the result of a congenital defect in the middle coat of the artery

- 7.2. **Traumatic.** These are usually "false" aneurysms caused by traumatic rupture of an artery, followed by organisation of the thrombus and formation of a communicating sac. A "true" aneurysm may be formed by injury to the wall of an artery resulting in scar tissue which later stretches.
- 7.3. **Infective.** Syphilis used to be the primary cause of this type of localized infection which weakens the arterial wall. This type may also arise as **mycotic** aneurysms due to infected emboli resulting from bacterial endocarditis.
- 7.4. **Collagen disease,** in which there is cystic necrosis of the middle coat of the artery. It is a feature of **Marfan's syndrome,** a generalised disorder of connective tissue but may occur as an age-related non-specific degenerative lesion.
- 7.5. **Atherosclerotic.** Atherosclerosis is the most common cause of aneurysms, particularly of the large arteries such as the aorta.

## CONCLUSION

8. In the majority of cases an aneurysm is caused by atherosclerosis. Other causes are congenital, traumatic, infective or degenerative. Hypertension is commonly an additional factor in the production of an aneurysm.

## REFERENCES

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December 1992