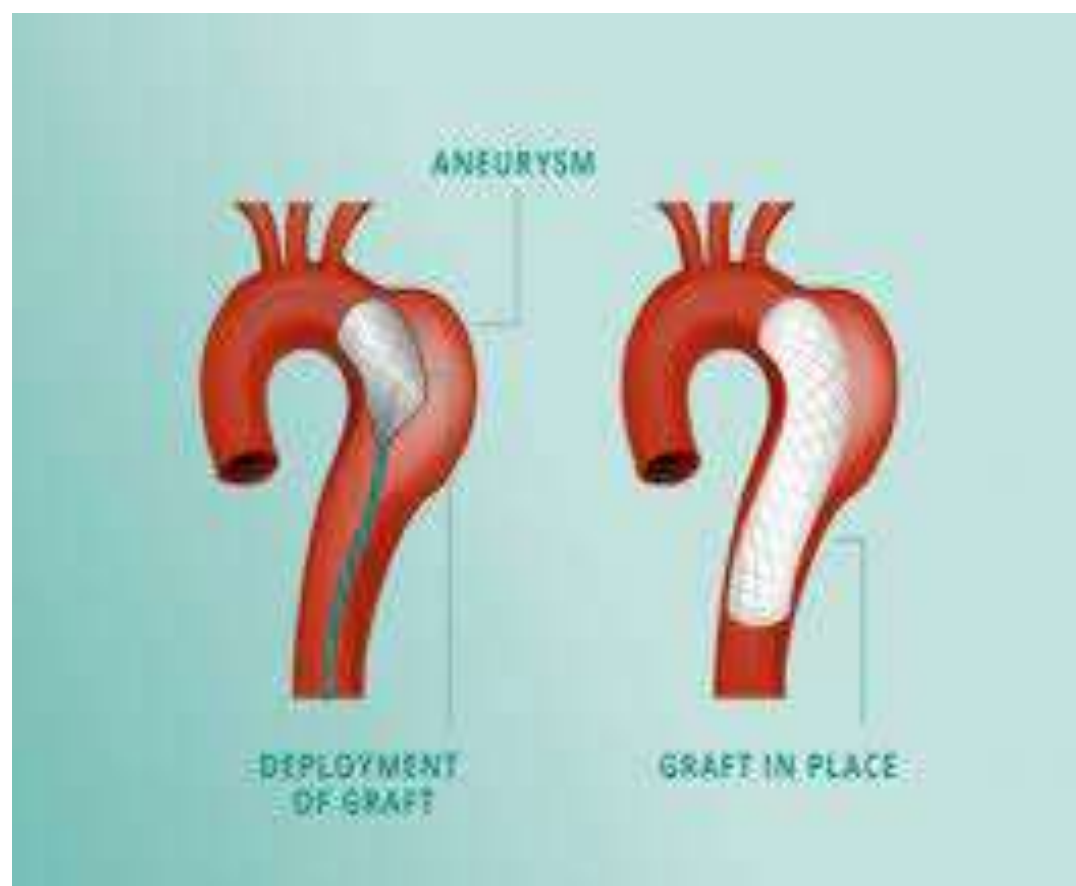


# Anueurysms (Pathology)

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# Definition

- An aneurysm is defined as the permanent abnormal dilatation of a blood vessel occurring due to congenital or acquired weakening or destruction of the vessel wall.



# Classification

- Depending upon the composition of wall
  - ✓ True aneurysm composed of all the layers of a normal vessel wall.
  - ✓ False aneurysm having fibrous wall and occurring often from trauma

# Classification

## Types of Aneurysms



Normal  
Blood Vessel

Smooth, even walls



Saccular Aneurysm

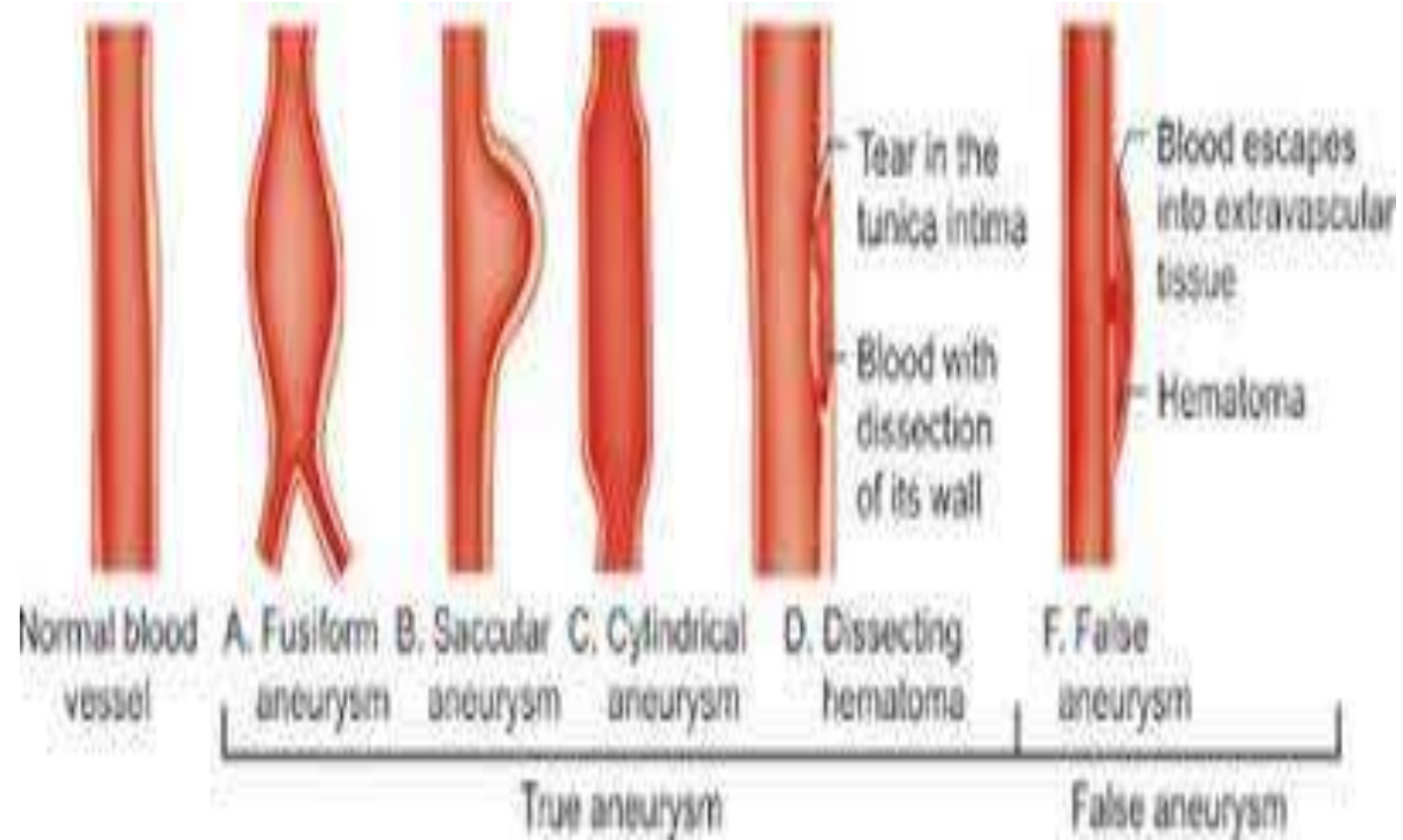
Bulges out only on one side,  
and are the most common  
type of cerebral aneurysm.



Fusiform Aneurysm

Bulges or balloons out on  
all sides of the blood vessel.  
Overall the most common type.

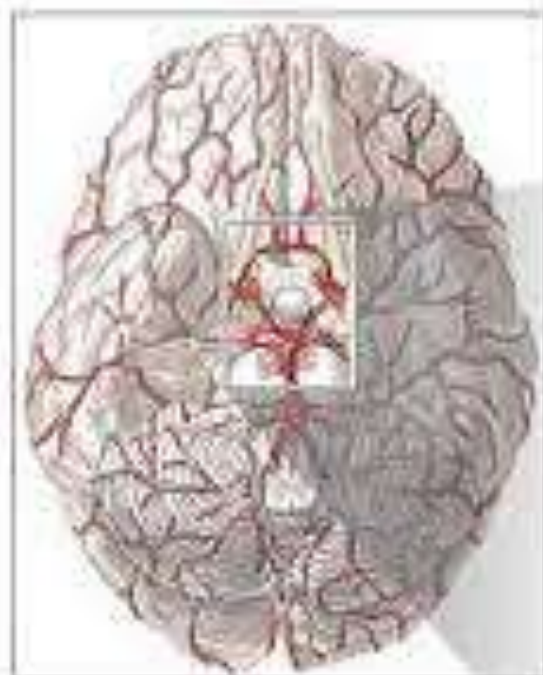
- ✓ Cylindrical with a continuous parallel dilatation
- ✓ Serpentine or varicose which has tortuous dilatation



- ✓ Racemose or circoid having mass of intercommunicating small vessels.
- ✓ Berry Aneurysm which are small dilatation especially affecting the circle of willis in the base of brain.

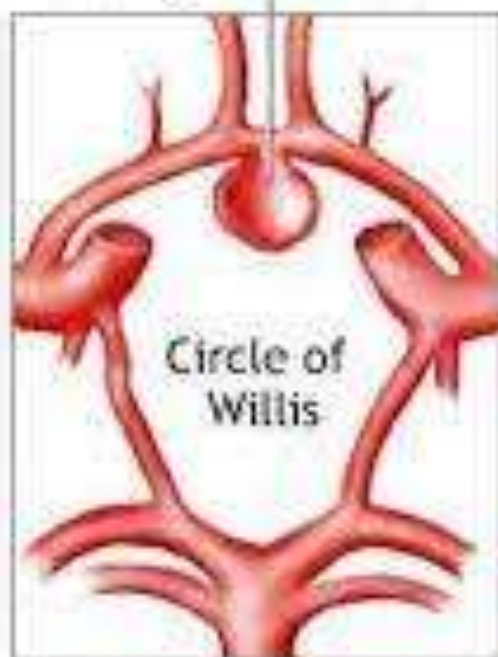






Bottom view of brain  
and major arteries  
of the brain

Berry aneurysm on the  
anterior communicating  
artery of the brain



- Based on Pathogenic mechanisms
- ✓ Atherosclerotic aneurysms ( most common type)
- ✓ Syphilitic aneurysms ( found in teritiary stage)
- ✓ Dissecting aneurysms in which blood enters to dissecting wall of blood vessel.
- ✓ Mycotic aneurysms which results from weakening of arterial wall by microbial infection.

# Atherosclerotic Aneurysm

- Most common form of aortic aneurysm
- Most commonly seen in male especially after 50yrs of age
- Most common in abdominal aorta.so all forms of aneurysms of abdominal aorta ( fusiform,cylindrical,saccular) should be considered atherosclerotic

- **General appearance**

- ✓ They may be of variable size but are often larger than 5-6cm in diameter

- ✓ Atherosclerotic aneurysms are most frequently fusiform in shape and lumen of aneurysm contain mural thrombus.

- **Microscopic examination**
- ✓ Predominance of fibrous tissue in the media and adventitia with mild chronic inflammatory reaction
- ✓ The intima and inner part of the media shows atheromatous plaques and mural thrombus.

- **Syphilitic aneurysm**

### General appearance

- ✓ Most commonly occur in ascending part and arch of aorta
- ✓ Saccular in shape and 3-5cm in diameter
- ✓ Intimal surface is wrinkled and shows tree-bark appearance
- ✓ When aortic valve is involved there is stretching and rolling of valve leaflets and left ventricular hypertrophy due to volume overload. This results in massively enlarged heart called '**cor bovinum**'.

- Microscopic examination
- ✓ The features of healed syphilitic aortitis are seen.



- **Dissecting aneurysms**

### General appearance

- ✓ Dissecting aneurysm differs from atherosclerotic and syphilitic aneurysm in having no significant dilatation . therefore it is currently referred to as dissecting haematoma.
- ✓ There is a sharply incised transverse or oblique intimal tear 3-4cm long most often located in ascending part of aorta

✓ Microscopic examination

✓ characteristic features of cystic medial necrosis are found

