

Aortic Aneurysm

Description

1. An aneurysm is a dilation involving an artery formed at a weak point in wall.

Three types of aortic aneurysms are:

Abdominal Aortic Aneurysm (AAA)

Thoracic aortic aneurysm

Dissecting aneurysm of the aorta.

Its occur primarily in men older than 50 years. The mortality rate for clients with ruptured aneurysm is very high

B. Etiology.

Most aneurysms are caused by atherosclerosis.

C. Path physiology.

All aneurysms involve a damaged media layer of the vessel by congenital weakness, trauma, or disease process. Large and medium-sized affected when lipids, calcium, blood components, carbohydrates, and fibrous tissue accumulate on the intimal layer of artery. This plaque weakens the artery, making it more susceptible to aneurysms. In some situations, the aorta may develop a tear in the intima or the media layer, resulting in a dissection.

Assessment :

1. Risk factors include genetic , smoking, and hypertension

Clinical manifestations

a. AAA. Approximately two thirds of clients with AAA are asymptomatic, but client may complain of feeling the "heart beating" in the abdomen or an abdominal mass presence of a pulsating mass in the middle and upper abdomen, and systolic bruit

b. Thoracic aortic aneurysms. Clinical manifestations may include constant, boring chest pain when lying in the supine position, brassy cough, hoarseness, dysphasia.

C. Dissecting aneurysm of the aorta.

Clinical manifestations may include the sudden onset of severe and persistent "tearing" or "ripping" in the anterior chest or back that extends to the shoulders, epigastric area, and abdomen and include 'cardiovascular, neurological, and gastrointestinal symptoms, depending on the location of the dissection.

3. Laboratory and diagnostic study findings

a. Computed tomography (CT) scans are useful in determining the size of aneurysms

b. Ultrasound determines size of aneurysm.

c. Routine chest radiographs often detect aneurysms.

Nursing management

1. Administer medications, which may include antihypertensive medications .

2. Prepare the client for serial ultrasonography, which is conducted every 6 months to assess size of aneurysm.
3. Ensure that no additional pressure is exerted in abdominal cavity, such as enemas, tight belts, or trauma.
4. Implement nursing care for the client undergoing surgery to repair aneurysms
When the aneurysm is larger than 5 cm or there is a possibility of rupture, it will surgically removed
5. After-surgery, instruct the client to modify lifestyle as the client diagnosed With hypertension

Cardiovascular status

Monitor and record vital signs, I/O, neurovascular checks, and laboratory studies

Administer medications, as prescribed

Encourage the patient to express feelings such as a fear of dying

Assess pain

Check peripheral circulation: pulses, temperature, color, and complaint of abnormal sensations

Allay the patient's anxiety

*Observe the patient for signs of shock, such as anxiety; restlessness; decreased pulse pressure; increased thready pulse; and pale, cool, moist, clammy skin.

*Assess the abdomen for distention

*Individualize home care instructions

*Recognize the signs and symptoms of decreased peripheral circulation, such as change in skin color or temperature, complaints of numbness or tingling, and absent pulses

*Adhere to activity limitations, alternate rest periods with activity, adhere-to prescribed exercise regimen

*Maintain a quiet environment

Complication

Rupture of aneurysms

Hemorrhage

Renal insufficiency

Possible surgical intervention

Resection of aneurysm

Endovascular graft repair

Abdominal Aneurysms

Definition

Dilation of or localized weakness in the medial layer of an abdominal artery

Causes

Most common

Atherosclerosis , Hypertension , Smoking

Less common

Congenital defect , Trauma , Syphilis , Infection

Marfan syndrome

Path physiology

Degenerative changes from atherosclerosis, weakening the medial layer

Continued weakening from the force of blood flow, resulting in out-pouching of the artery

Four types: saccular, fusiform, dissecting, false (see *Types of aortic aneurysms*)

Assessment findings

Asymptomatic

Lower abdominal pain, lower back pain

Abdominal mass to the left of the midline

Abdominal pulsations

Bruits

Diminished femoral pulses

Systolic blood pressure in the legs lower than that in the arms

Deep, diffuse chest pain

Hoarse voice

Coughing

Dyspnea

Dysphagia

Jugular vein distention

Edema

Diagnostic test findings

Chest X-ray: aneurysm

ECG: differentiation of aneurysm from MI

Abdominal ultrasound: aneurysm

Aortography

Medical management

-Activity: bed rest

Monitoring: vital signs, I/O, and neurovascular checks

Analgesic: oxycodone (Tylox)

Beta-adrenergic blocker: propranolol (Inderal)

Antihypertensives: methyldopa (Aldomet), hydralazine (Apresoline prazosin (Minipress))