Lecture -14-Valvular Disease Of The Heart

:by

Assistant lecturers

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Adult Nursing

Definition:

- The function of normal heart valves is to maintain the forward flow of blood from the atria to the ventricles and from the ventricles to the great vessels.
- Valvular damage may interfere with valvular function by stenosis or by impaired closure that allows backward leakage of blood (valvular insufficiency, regurgitation, or incompetence).

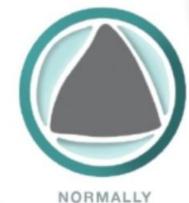
Valvular Disorders

- Mitral stenosis
- Mitral regurgitation
- Mitral valve prolapse
- Aortic stenosis
- Aortic regurgitation

STENOSIS



DOESN'T OPEN PROPERLY



OPEN





DOESN'T CLOSE PROPERLY



NORMALLY

Mitral Stenosis

- Most common cause: rheumatic fever
- Results from rheumatic carditis
- Causing valve thickening by fibrosis and calcification
- Non-rheumatic causes
- Atrial tumor
- Calcium accumulation

- Diagnostics
- Echocardiogram
- Chest X ray
- EKG
- Cardiac catheterization

Clinical Manifestations

Mild stenosis

- Asymptomatic
- Beginning
- Dyspnea on exertion (DOE)
- Orthopnea
- Paroxysmal nocturnal dyspnea (PND)
- Dry cough

Later

- **Hemoptysis**(Cough with Blood)
- Pulmonary edema
- Right-sided heart failure
- Hepatomegaly (Enlargement of the liver)
- Neck vein distention (JVD)
- Pitting edema
- Apical diastolic murmur

Mitral Regurgitation

- Mitral Regurgitation (Insufficiency)
- Fibrotic and calcific changes prevent the mitral valve from closing completely during systole.
- End result left atrial and ventricular dilation and hypertrophy.

Causes

- Rheumatic heart disease
- Degenerative calcification
- Left ventricular hypertrophy
- MI
- Congenital defects

Clinical Manifestations

- Progresses slowly
- Asymptomatic for decades
- Chief complaints
- Fatigue
- Chronic weakness
- DOE
- Orthopnea
- Normal blood pressure
- Atrial fibrillation (75% of all clients).
- Changes in respiratory patterns
- High pitched systolic murmur at apex
- Third heart sound (S3 or S4)

Surgical management

- Valve replacements
- Prosthetic
- Biologic
- Surgical repairs
- Balloon valvuloplasty –cath lab
- Reconstructive or "Valvuloplasty":
- a. Open commisurotomy
- b. Annuloplasty repairs

- Pre-Operative Care
- Similar to CABG surgery •
- Pain
- Incisional care
- Prevent pulmonary complications
- STOP oral anticoagulants 72 hours before procedure

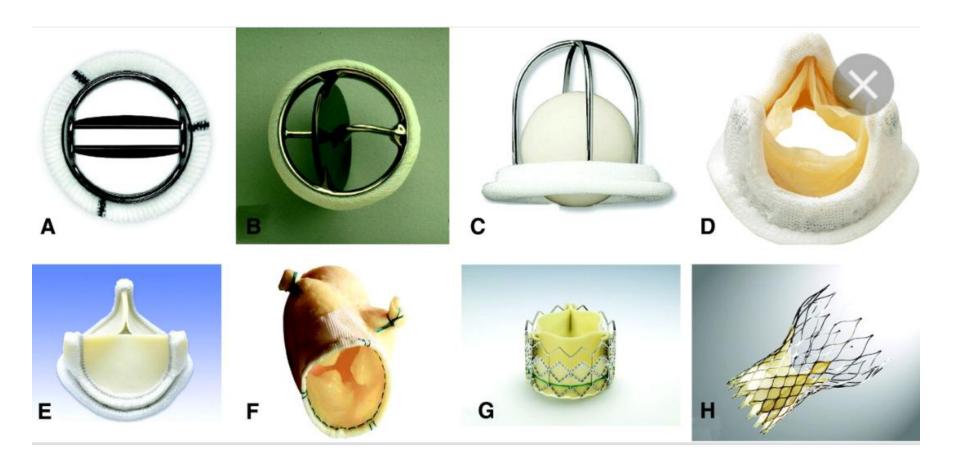
- Post-Operative Care
- Respiratory care
- Monitor for hemorrhage
- Cardiac output reduction
- Discharge teaching

Complications

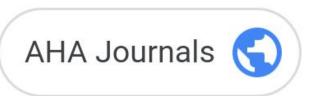
- Fluid & Electrolyte imbalances
- Hypotension
- Bleeding
- Cardiac tamponade
- Altered cerebral perfusion
- Hypothermia
- Hypertension
- Infection

Client Education

- Disease process
- Medications
- Anticoagulants
- Prophylactic antibiotics
- Rest and activity plan







Prosthetic Heart Valves |



