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Physiotherapy cardio-respiratory Clinic Course

L 25: Valvular Heart Diseases

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ACQUIRED ABNORMALITIES OF HEART VALVES

- Stenosis: valve does not open fully, flow obstruction results
- Insufficiency: valve does not close completely, backward flow occurs
- Mixed: most valves have a combination
- According to degree, duration, etiology, valvular abnormalities may produce secondary changes in heart, blood vessels, or other organs
- Numerous causes of valve disease, may affect one or more valves

Valvular Heart Disease

Stenosis - failure to open, preventing forward flow

Regurgitation (insufficiency, incompetence) - failure to close, allowing reverse flow

- **Aortic Stenosis**

- Postinflammatory scarring - RHD
- Senile calcific aortic stenosis
- Calcification of bicuspid valve

- **Aortic Regurgitation**

- Postinflammatory scarring
- Syphilitic aortitis
- Ankylosing spondylitis
- Rheumatoid arthritis
- Marfan's syndrome

Acquired Aortic Valve Stenosis

- Most are due to age related degenerative calcification
- 6-7th decades (70 yrs old) for tricuspid; 40-60 yrs old for calcified congenital bicuspid aortic valve
- Gross: heaped up calcific masses within aortic cusps
- Symptoms: ischemic chest pain, fatigue, fainting, sudden death
- LVH may develop
- Treatment: AV replacement or balloon angioplasty

Mitral Regurgitation

Leaflet - postinflammatory scarring, infective endocarditis

Tensor - rupture of papillary muscle or chordae tendineae

Left ventricle - LV dilatation, calcification of mitral ring

Mitral stenosis

postinflammatory scarring (RHD)

Mitral Valve Prolapse

- Most often 20-40 yrs old
- Gross: inter-chordal hooding (ballooning) of posterior leaflet
- Symptoms: fatigue, palpitations
- Signs: mid-systolic click, late diastolic murmur
- Predisposes to infective endocarditis, mitral insufficiency, arrhythmias, sudden death

End