Cardiac Pathology 3:
Valvular Heart Disease,
Cardiomyopathies,
and Tumors
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Cardiac Pathology Outline

- Blood Vessels
- Heart I
- Heart II
  - Valvular Heart Disease
  - Cardiomyopathies
  - Tumors
Valvular Heart Disease

- Aortic stenosis: from wear and tear over time, can cause angina, fainting, CHF
- Mitral insufficiency: caused by valve prolapse, usually asymptomatic
- Mitral stenosis: caused by rheumatic fever (multisystem immune-mediated disease following untreated strep throat infection)
Infective Endocarditis

- Bacterial form “vegetations” on heart valves
- Fever, flu-like symptoms
- Acute endocarditis
  - highly virulent bug attacks normal valve
  - abrupt onset, 50% mortality rate (sepsis, emboli)
- Subacute endocarditis
  - low virulence bug colonizes abnormal valve
  - slow onset, most patients recover
Infective endocarditis: vegetations on valve
Infective endocarditis: splinter hemorrhage of nail bed
Cardiac Pathology Outline

- Blood Vessels
- Heart I
- Heart II
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  - Cardiomyopathies
Normal

Dilated cardiomyopathy

Hypertrophic cardiomyopathy

Restrictive cardiomyopathy
- Genetic, infectious, toxic (esp. alcohol)
- Heart is dilated and can’t contract well
- Progressive CHF
- Relatively high mortality
- Mutation in sarcomere protein gene
- Heart is hypertrophic and can’t fill well
- Atrial fib, arrhythmia, sudden death
- Variable mortality
• Secondary to radiation, amyloidosis, sarcoidosis
• Heart is stiff and can’t fill well
• Shortness of breath, edema
• Relatively high mortality

Dilated cardiomyopathy

Hypertrophic cardiomyopathy

Restrictive cardiomyopathy
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Cardiac Tumors

- Heart tumors are rare!
- Metastatic tumors are more common than primary tumors.
- Most common primary tumor: myxoma
Cardiac myxoma