

Block O Heart Sounds

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Mitral Stenosis

- Loud S1
- Loud P2 - if pulmonary HTN
- Opening snap
- Low pitched mid diastolic murmur located at apex (does NOT radiate)
- Graham steel murmur
 - indicates pulmonary HTN
 - high pitched decrescendo diastolic murmur
- Apex beat: localised and tapping

Mitral Regurgitation

- Soft S1
- Wide splitting of S2 - due to early closure of Aortic valve
- S3
- High pitched, blowing, pansystolic murmur at apex
- Murmur radiates to axilla
- Apex beat: Laterally displaced

Mitral Valve Prolapse

- high pitched mid systolic click
- holosystolic or late systolic murmur

Aortic Stenosis

- Soft A2
- Paradoxical split S2
- S4
- Pulsus parvus et tardus
- Crescendo decrescendo ejection systolic murmur at right 2nd intercostal space
- Murmur radiate to carotids
- Apex beat: Not displaced, it is sustained

Aortic Regurgitation

- High pitched early diastolic decrescendo murmur at left sternal border
- Austin Flint Murmur - Mid diastolic murmur heard at cardiac apex in severe AR
- pulsus bisferiens / collapsing / water hammer pulse
- Apex beat displaced: down and to the left

Hypertrophic Cardiomyopathy

- Loud S4
- Double apical pulsation - palpable 4th heart sound due to left atrial hypertrophy
- Pansystolic murmur at apex - due to mitral regurgitation

- Bisferiens pulse - rapidly increasing carotid pulse with two upstrokes
- Jerky carotid pulse
- Ejection systolic murmur at LLSB - crescendo decrescendo - due to left ventricular outflow tract obstruction
- Sustained apex beat

Acute Pericarditis

- Pericardial Friction Rub - high pitched, superficial, scratchy sound usually heard in systole

Pericardial Effusion

- Muffled heart sounds
- Soft apex beat
- Dullness at left lung base (bcz it may be compressed by pericardial fluid)
- Pericardial friction rub may or may not be present

