

MODULE FOR AUSCULTATION OF HEART

NORMAL AND ABNORMAL HEART SOUNDS

INTRODUCTION (RATIONALE):

Auscultation is the most important part of the examination to find working of different parts of heart and any abnormality can be detected.

During auscultation note the following:

1. Heart sounds(first,second,third,fourth)
2. Other sounds
3. Murmur
4. Pericardial rub

Heart sounds: There are four valves in the heart. Their closure produces sound while opening is normally quiet.

EQUIPMENT/MATERIAL NEEDED:

1. Stethoscope

It consists of three part

- I. Chest piece a—diaphragm
b—Bell
- II. Tubing 25 cm
- III. Ear piece

Areas of auscultation: There are four areas of auscultation

1. **Mitral area:** Corresponds to apex or left 5th intercostals space
2. **Tricuspid area:** It is closed to lower part of sternum on left side of 4th intercostals space.
3. **Pulmonary area:** left 2nd intercostals space close to sternum.
4. **Aortic area:** Right 2nd intercostals space close to sternum

NORMAL HEART SOUNDS IS S1,S2

S1: is produced by closure of mitral and tricuspid valves and sound like lub.

S2: is produced by closure of pulmonary and aortic valves and sound like dub

Extra sounds

S3: This is low pitch sound occur in early diastole at the time of rapid ventricular filling

Causes

- Children and healthy young adult
- Pregnancy
- Heart failure
- Mitral regurgitation

S4: This is low pitch sound and occurs in late diastole due to atrial contraction if ventricles are stiff.

Causes

- Hypertension
- IHD

Abnormal heart sounds

MURMUR: These are abnormal sounds and are of longer duration as compared to heart sounds. These are produced due to turbulence in the blood flow.

CHARACTERISTIC OF MURMUR: Note following points:

- Timing
- Intensity
- Site of maximum intensity
- Radiation
- Character
- Pitch
- Effect of respiration
- Effect of posture

TYPES OF MURMUR: The murmur which comes with the carotid pulsation is systolic and the murmur which alternates with it is diastolic. Palpate the carotid artery while auscultating.

- **Pericardial rub:** This is superficial scratchy sound due to rubbing of two surfaces of pericardium best audible at left lower sternum.
- **Opening snap:** This sound is produced by sudden opening of stenosed mitral valve best heard at the apex.
- **Ejection click:** It is early systolic sound heard over aortic or pulmonary area due to opening of stenosed aortic pulmonary valves.
- **Mid systolic click:** It is high pitched sound heard during systolic at apex resulting from mitral valve prolapsed.