

2025-10-31

Appendix K (CLASS 2): Bedside Cardiac Assessment Summary Handout

Class 2 Summary Handout. Appendix K. In: Meisel JL, Chen DCR, Cohen GM, et al. Listen before you auscultate: an active-learning approach to bedside cardiac assessment. MedEdPORTAL. 2023;19:11362. https://doi.org/10.15766/mep_2374-8265.11362
<https://hdl.handle.net/2144/51458>
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LEARNING GOALS

1. Learn how to use the systematic approach to bedside cardiac assessment (BCA) when caring for patients.
2. Interpret clinical findings related to each step of BCA.
3. Use the systematic approach to improve your listening and diagnostic reasoning skills.
4. Correlate cardiac pathophysiology with associated findings on BCA.
5. Reflect on ways that patient-centered communication is fundamental to bedside cardiac assessment.

DIAGNOSTIC TIPS

1. Use the BCA approach first to generate a diagnostic hypothesis about what you *expect* you will hear, and then listen. Construct a hypothesis before auscultating.
2. Memorize what heart sounds *sound like* until they are singing in your head.
3. Listen to prove the sound is *not* there.
4. Report the history, the “chronology of the present illness,” so it is understood by your audience.

CAUTION

This curriculum is not a substitute for patient-specific diagnostic reasoning or therapeutic decision-making. Always use clinical judgment and confirm medication indications and dosing.

ACKNOWLEDGMENT

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DISCLAIMER

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LISTEN BEFORE YOU AUSCULTATE



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An active-learning approach to bedside cardiac assessment

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Listen Before You Auscultate Bedside Cardiac Assessment (BCA) Curriculum Summary

• LISTEN to the PATIENT

Capture the History of the Present Illness

• USE A 6-STEP SYSTEMATIC APPROACH*

1. LOOK at the PATIENT

Appearance, vital signs, skin, position

2. FEEL the HEART

2 PMIs:

- Pressure overload (diffuse, sustained)
- Volume overload (laterally displaced, dyskinetic)

3. ASSESS RIGHT HEART function

History, symptoms, weight gain, pulmonary exam, JVP (see graphic), HJR, peripheral edema

4. ASSESS LEFT HEART function

History, symptoms and signs of backward (congestive) vs. forward (low output) heart failure

GENERATE
DIAGNOSTIC HYPOTHESES

5. LISTEN to the HEART

See graphics

- 2 gallops:
 - Pressure overload S4
 - Volume overload S3
- 2 systolic murmurs: AS, MR
- 2 diastolic murmurs: AR, MS

6. CONSIDER confirmatory STUDIES

ECG, telemetry, chest film, troponin, BNP, echo, stress, perfusion imaging, angiography

* Obtain ECG immediately if clinical history suggests active ischemia

Jugular Vein

Observations

Collapse of vessel (its sulcus) is more noticeable
Biphasic: usually two pulsations per systole (a and v waves)
Meniscus falls with inspiration, rises with expiration

Maneuvers

May need to lower bed in order to see pulsations
Distends if you put pressure above the clavicle
Pulsations extinguished by pressure from above the venous column
No pulsations palpable

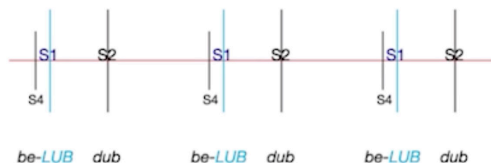
Carotid Artery

Distension of vessel (its pulsation) is more noticeable
One pulsation per systole

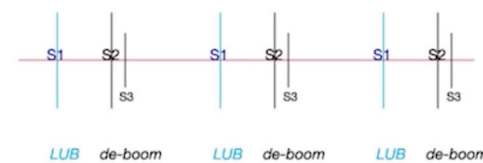
No effect of respiration on pulsation

Pulsation not affected by head of bed position
Pressure above the clavicle does not cause distension
Pressure from above does not extinguish pulsation

Palpable pulsation

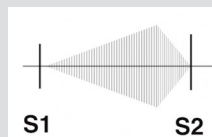


- 2 GALLOPS -



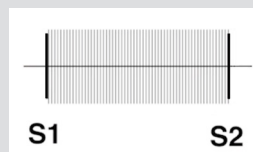
2 Systolic Murmurs

- Aortic Stenosis
- Start with correct technique
 - Stethoscope: bell or diaphragm
 - Chest wall: upper right sternal border, radiating to carotids
 - Patient Position: less important
 - Phonocardiogram
 - Diamond-shaped
 - Late systolic harsh murmur, no gap before A2
- Mnemonic: guttural-sounding “err, err, err”



•Mitral Regurgitation

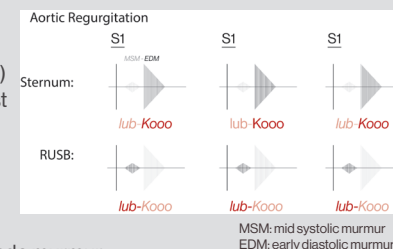
- Start with correct technique
- Stethoscope: usually diaphragm
- Chest wall: apex (radiation depends on eccentricity of regurgitant jet)
- Patient Position: left laterally recumbent
- Phonocardiogram
 - Usually blowing, holosystolic murmur
 - M1 not heard
 - S2 may be obscured
- Mnemonic: “shhh, shhh, shhh”



- MURMURS -

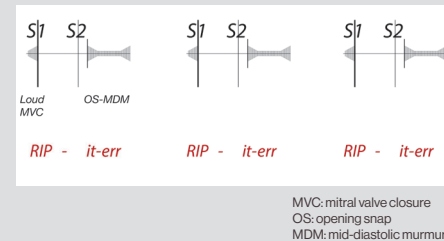
2 Diastolic Murmurs

- Aortic Regurgitation
- Start with correct technique
 - Stethoscope: diaphragm (high pitch)
 - Chest wall: diastolic component best over sternum/mid-left sternal border
 - Patient Position: leaning forward, breath stopped in full expiration
 - Phonocardiogram
 - Early diastole
 - Quiet, short, blowing, decrescendo murmur
- Mnemonic: “lub-Kooo, lub-Kooo, lub-Kooo”



•Mitral Stenosis

- Start with correct technique
- Stethoscope: bell (low pitch)
- Chest wall: apex, radiating to axilla
- Patient Position: left laterally recumbent
- Phonocardiogram
 - Accented M1
 - Opening snap, followed by...
 - Quiet, early-diastolic rumble
- Mnemonic: “RIP - it-err, RIP - it-err, RIP - it-err”



Caution:
Auditory mnemonics are intended to be diagnostic aids, not to be communicated to patients out of context.