

CARDIOLOGY: HIGH YIELD RECALL & QUESTION PATTERNS

Analysis: Concepts appearing **2+ times**. "Question Type" highlights exactly *how* examiners test these topics based on the recall file.

1. Ischemic Heart Disease (MI & Angina)

Diagnosis & Localization

- **Inferior Wall MI:** ST Elevation in leads **II, III, aVF**. REPEATED 5X
Q: "Patient presents with chest pain, ECG shows ST elevation in II, III, aVF. What is the diagnosis?"
- **Anterior Wall MI:** ST Elevation in leads **V1-V4**. REPEATED 2X
Q: "ECG shows ST elevation V1-V4. What is the diagnosis/treatment?"
- **Biomarkers:** **Troponin** is the most specific/sensitive marker (vs CK-MB or LDH). REPEATED 3X
Q: "Which biomarker is most specific for MI?"

Management

- **STEMI Rx:** Primary PCI (Gold Standard) or Thrombolysis. REPEATED 4X
Q: "Diabetic with chest pain/ST elevation. What is the best treatment option?" (Answer: Angiography/PCI).
- **Drug Mechanism:** Nitrates. REPEATED 2X
Q: "How does sublingual nitroglycerin alleviate symptoms?" (Answer: Decreasing preload/venodilation).

2. Heart Failure

Clinical Features

- **Left Sided Failure:** Orthopnea, PND, Bibasilar Crackles. REPEATED 4X
Q: "Patient with SOB lying flat (orthopnea) and basal crackles. What is the diagnosis?"
- **Right Sided Failure:** Raised JVP, Pedal Edema, Hepatomegaly. REPEATED 3X
Q: "Which finding is commonly seen in right-sided heart failure?"
- **Diagnosis:** Echocardiography / BNP. REPEATED 3X
Q: "What is the best initial investigation for heart failure?"

Pharmacology

- **Mortality Benefit:** ACEi, Beta-Blockers, Spironolactone. REPEATED 5X
Q: "All of the following drugs have mortality benefit EXCEPT?" (Answer: Verapamil/Digoxin).
- **Acute Management:** Diuretics (Furosemide). REPEATED 2X
Q: "Patient with acute SOB, crackles, edema. Best initial drug?" (Answer: Furosemide).

3. Valvular Heart Disease

Aortic Stenosis (AS)

- **Signs:** Ejection Systolic Murmur (Right 2nd ICS) radiating to **Carotids**. **REPEATED 3X**

Q: "Systolic ejection murmur at right upper sternal border radiating to neck/carotids. Diagnosis?"

- **Management:** Valve Replacement/Balloon Valvuloplasty. **REPEATED 2X**

Q: "Child with severe AS gradient >50mmHg. What is the treatment?"

Mitral Stenosis (MS)

- **Murmur:** Mid-Diastolic Rumble + Opening Snap. **REPEATED 3X**

Q: "Loud S1, Opening Snap, Mid-diastolic murmur. Diagnosis?"

Mitral Regurgitation (MR)

- **Murmur:** Pan-systolic at Apex radiating to **Axilla**. **REPEATED 4X**

Q: "Pan-systolic murmur at apex. What is the diagnosis?"

- **Complication:** Heart Failure. **REPEATED 2X**

Q: "Severe MR with heart failure despite meds. Next step?" (Answer: Valve replacement/repair).

PDA

- **Murmur:** Continuous "Machinery" Murmur. **REPEATED 4X**

Q: "Infant with continuous machinery murmur. Diagnosis?"

4. Congenital Heart Disease (Peds)

Tetralogy of Fallot (TOF):

- **CXR:** "Boot-shaped Heart". **REPEATED 3X**
- **Question Type:** "Cyanotic child, systolic murmur, boot-shaped heart on X-ray. Diagnosis?" or "Child squats after playing (Tet spell)."

Cyanotic Lesions

- **Transposition (TGA):** "Egg on string/side". **REPEATED 3X**

Q: "Neonate with cyanosis, single S2, Egg-shaped heart. Diagnosis?"

- **TAPVR:** "Snowman" / "Figure of 8". **REPEATED 2X**

Q: "CXR shows Figure of 8 appearance. Diagnosis?"

Acyanotic Lesions

- **VSD:** Pan-systolic murmur at LLSB. **REPEATED 5X**

Q: "Harsh pan-systolic murmur at left lower sternal border. Diagnosis?"

- **ASD:** Fixed Wide Splitting of S2. **REPEATED 3X**

Q: "Ejection systolic murmur with fixed wide splitting of S2. Diagnosis?"

- **Coarctation:** Radio-femoral delay / HTN. **REPEATED 4X**

Q: "High BP in arms, low in legs/delayed femoral pulse. Diagnosis?"

5. Infective Endocarditis (IE)

Diagnosis (Duke's Criteria)

- **Major Criteria:** New Murmur, Positive Blood Cultures, Vegetation on Echo. **REPEATED 5X**

Organisms

- **Strep. Viridans:** Native valve/Dental. **REPEATED 3X**

Q: "Which is a Major Duke criterion?" (Answer: New valvular regurgitation / Vegetation).

- **Peripheral Signs:** Osler Nodes, Janeway Lesions, Splinter Hemorrhages. REPEATED 4X

Q: "Patient with fever and painful nodules on fingers (Osler) / painless spots on palms (Janeway). Diagnosis?"

Q: "Post-dental procedure or native valve endocarditis. Most likely organism?"

- **Staph. Aureus:** IV Drug Users. REPEATED 2X

Q: "IV drug user with fever and murmur. Organism?"

6. Rheumatic Fever

Jones Criteria:

- **Question Type:** "Which is a Major/Minor criteria?" or "Child with joint pain, fever, and rash after sore throat."

- **Prophylaxis:** Penicillin duration. REPEATED 2X

Q: "Child with carditis but no residual disease. How long for prophylaxis?" (Answer: 10 years or until 21).

- **Chorea:** Sydenham's Chorea features. REPEATED 2X

Q: "Child with emotional lability and purposeless movements. Diagnosis?"

7. Arrhythmias

Supraventricular Tachycardia (SVT)

- **Rx:** Adenosine. REPEATED 4X

Q: "Narrow complex tachycardia >150 bpm. First line drug?" (Answer: Adenosine).

Atrial Fibrillation (AF)

- **ECG:** Irregularly irregular. REPEATED 3X

Q: "Irregular pulse, no P waves. Diagnosis?"

- **Rx:** Rate control (Beta-blocker) + Anticoagulation. REPEATED 3X

Q: "AF patient. How to prevent stroke?" (Answer: Warfarin/Anticoagulant).

Heart Block

- **3rd Degree:** Complete dissociation. REPEATED 3X

Q: "Regular P waves and QRS complexes but no relationship. Diagnosis?"

Ventricular Tachycardia (VT)

- **ECG:** Broad complex. REPEATED 2X

Q: "Wide QRS tachycardia. Diagnosis?"

8. Hypertension

- **Targets:** < 140/90 generally. REPEATED 3X

Q: "Diabetic patient BP target?" (Answer: < 140/90 or < 130/80 depending on guideline version in option).

- **Emergency:** High BP + Organ Damage. REPEATED 3X

Q: "BP 220/130 with chest pain/confusion. Diagnosis/Rx?" (Answer: Hypertensive Emergency / IV Nitroprusside or Labetalol).

- **Secondary HTN:** Coarctation / Renal. REPEATED 2X

Q: "Young patient with high BP. Cause?" (Answer: Coarctation or Renal).

PEDIATRIC CARDIOLOGY: HIGH YIELD RECALL ANALYSIS

Analysis Criteria: Concepts appearing in **2+ questions** across different colleges. "Question Type" indicates the specific clinical vignette style used by examiners.

1. Acyanotic Congenital Heart Defects

Ventricular Septal Defect (VSD)

- **Murmur:** Harsh **Pan-systolic** (Holosystolic) at Left Lower Sternal Border (LLSB). **REPEATED 6X**
Q: "Infant with failure to thrive, sweating during feeds, and a harsh pan-systolic murmur at LLSB. Diagnosis?"
- **Complication:** Recurrent chest infections, CHF.
REPEATED 3X
Q: "Child with recurrent pneumonia and systolic murmur. Diagnosis?"

Patent Ductus Arteriosus (PDA)

- **Murmur:** Continuous "**Machinery**" Murmur (Infraclavicular). **REPEATED 5X**
Q: "Newborn/Infant with continuous machinery murmur and bounding pulses. Diagnosis?"
- **Management:** Indomethacin (to close) vs Prostaglandin (to keep open). **REPEATED 2X**
Q: "Contraindication to Indomethacin?" (Answer: Renal failure/Bleeding).

Atrial Septal Defect (ASD)

- **Auscultation:** **Fixed Wide Splitting** of S2.
REPEATED 4X
Q: "Asymptomatic child with ejection systolic murmur and fixed wide split S2. Diagnosis?"
- **Type:** Ostium Secundum is most common.
REPEATED 2X

Coarctation of Aorta

- **Clinical Sign:** **Radio-Femoral Delay**. **REPEATED 4X**
Q: "Child with high BP in arms and low BP/weak pulses in legs. Diagnosis?"
- **Association:** Turner Syndrome. **REPEATED 2X**

2. Cyanotic Congenital Heart Defects

Tetralogy of Fallot (TOF):

The most tested cyanotic lesion.

- **CXR:** "Boot-shaped Heart" (Coeur en sabot). **REPEATED 4X**
- **Clinical:** Cyanosis, **Squatting** episodes (Tet spells). **REPEATED 3X**
- **Tet Spell Rx:** Knee-Chest position, Morphine, Oxygen. **REPEATED 3X**
- **Components:** VSD, Pulmonary Stenosis, Overriding Aorta, RVH. (ASD is NOT part of it).
REPEATED 3X

Transposition of Great Arteries (TGA)

- **CXR:** "**Egg on string**" or "Egg on side". **REPEATED 3X**
- **TAPVR:** CXR shows "**Snowman**" or "Figure of 8".
REPEATED 2X

Other Cyanotic Lesions

Q: "Cyanotic newborn at birth, single S2, egg-shaped heart. Diagnosis?"

- **Presentation:** Severe cyanosis within hours of birth (Duct dependent). **REPEATED 2X**

Q: "CXR appearance of Figure of 8. Diagnosis?"

- **Tricuspid Atresia:** ECG shows **Left Axis Deviation (LAD)** + LVH. **REPEATED 2X**

Q: "Cyanotic child with LAD on ECG. Diagnosis?" (Unusual for cyanotic HD which usually has RVH).

3. Rheumatic Fever

Jones Criteria (Recall Priority):

- **Major:** Carditis, Polyarthritis (Migratory), Chorea, Erythema Marginatum, Subcutaneous Nodules. **REPEATED 6X**
- **Minor:** Fever, Arthralgia (Joint pain without swelling).
- **Question Type:** "Child with sore throat 2 weeks ago, now has joint pain and new murmur. Diagnosis?"

Clinical Features

- **Sydenham's Chorea:** Emotional lability, purposeless movements (Milkm maid grip). **REPEATED 3X**
- **Organism:** Group A Beta-Hemolytic Streptococcus. **REPEATED 2X**

Prophylaxis Duration

- **Carditis + Valve Disease:** 10 years or until age 40 (whichever is longer). **REPEATED 2X**
- **Carditis NO Valve Disease:** 10 years or until age 21. **REPEATED 2X**

Q: "How long to give Penicillin prophylaxis?"

4. Arrhythmias & Miscellaneous

Supraventricular Tachycardia (SVT)

- **Presentation:** Infant with HR > 220, poor feeding, irritability. **REPEATED 3X**

Q: "Infant with HR 280 bpm, narrow QRS. Diagnosis/Treatment?"

- **Treatment:** Vagal Maneuvers -> **Adenosine**. **REPEATED 3X**

Infective Endocarditis

- **Risk Factors:** Congenital Heart Disease (VSD, TOF), Prosthetic Valves. **REPEATED 2X**
- **Signs:** Splinter hemorrhages, Osler nodes, New Murmur. **REPEATED 2X**

Congenital Heart Block

- **Association:** Maternal **SLE** (Anti-Ro/SSA antibodies). **REPEATED 2X**

Q: "Newborn with bradycardia/heart block. Mother has which condition?"