

PUZZLE
1138 - PRINCIPLES OF ANESTHESIA 1
UNIT IV – PREOPERATION & BASIC LIFE SUPPORT
BLS/ACLS Logic Puzzle: Cardiac Arrest Rhythm Management

Scenario:

Total marks: 10 marks

A 55-year-old male collapses in the hospital corridor with witnessed cardiac arrest. The code team arrives immediately. Initial monitor shows a shockable rhythm, but after two defibrillation attempts and CPR, the rhythm changes. The team must decide the next intervention based on ACLS protocols, considering reversible causes (Hs & Ts) and ROSC criteria. Available options: continue defibrillation, administer epinephrine, perform amiodarone push, or address a reversible cause like tension pneumothorax.

Clues:

1. BLS priority is high-quality CPR with minimal interruptions (<10 seconds) and early defibrillation for shockable rhythms (VF/pVT).
2. After 2nd shock in ACLS, give epinephrine 1 mg IV q3-5 min regardless of rhythm, but antiarrhythmic (amiodarone 300 mg IV) only for refractory VF/pVT.
3. If rhythm converts to organized (e.g., sinus) with pulse, target ROSC and check for reversible causes; no further shocks needed.
4. Tension pneumothorax (a "T") requires immediate needle decompression if suspected (e.g., tracheal deviation, absent breath sounds), before drugs.
5. Post-3 shocks without ROSC, rhythm remains shockable—antiarrhythmic indicated, not just epinephrine alone.
6. Witnessed arrest with immediate CPR/defib has better survival; focus on rhythm-specific sequence over random Hs/Ts unless obvious.

Question: After two shocks, CPR, and epinephrine, the 3rd monitor check shows persistent VF. What is the immediate next ACLS intervention, and why?

Rubrics

Criterion	Points
Key Elements	2 pts
Logical Steps	4 pts
Correct Solution	2 pts
Clinical Insight	2 pts
Total	10 pts