Pericardiocentesis

PROCEDURE

STEPS

1. Recognize tamponade and declare it — do not delay for a full work-up in a crashing patient
2. Attach cardiac monitoring and establish IV/IO access; give fluids en route as directed
3. Prep the subxiphoid area sterilely; anesthetize the site if time and condition permit
4. Insert a long needle just left of the xiphoid, angled up toward the left shoulder
5. Advance slowly while aspirating continuously, watching the ECG the whole time
6. Aspirate blood — removal of even a small volume can restore a pulse and pressure
7. Secure the needle or leave a catheter in place; reassess perfusion after aspiration
8. Transport rapidly to definitive care — this is a temporizing procedure only

BEFORE YOU START

- Indication: cardiac tamponade causing obstructive shock or traumatic arrest / peri-arrest
- Signs: hypotension, distended neck veins, muffled heart sounds — any of these may be absent
- Pericardiocentesis is a P3 Paramedic III skill in the Mercy guidelines (p.194)

KIT YOU NEED

- Long spinal or pericardiocentesis needle with large syringe and three-way stopcock
- Sterile prep and gloves, local anesthetic
- Cardiac monitor (ECG change warns of myocardial contact), IV/IO supplies

IF IT GOES WRONG

- ST elevation or ectopy on the monitor: the needle is touching the heart — withdraw slightly
- No blood or no improvement: blood may be clotted — do not delay transport for repeated attempts
- Complications: myocardial or coronary laceration, pneumothorax, dysrhythmia, liver injury

Take Home Message:

In tamponade, a needle and a syringe buy back a circulation: aspirate early, watch the ECG, and move — definitive care is surgical.