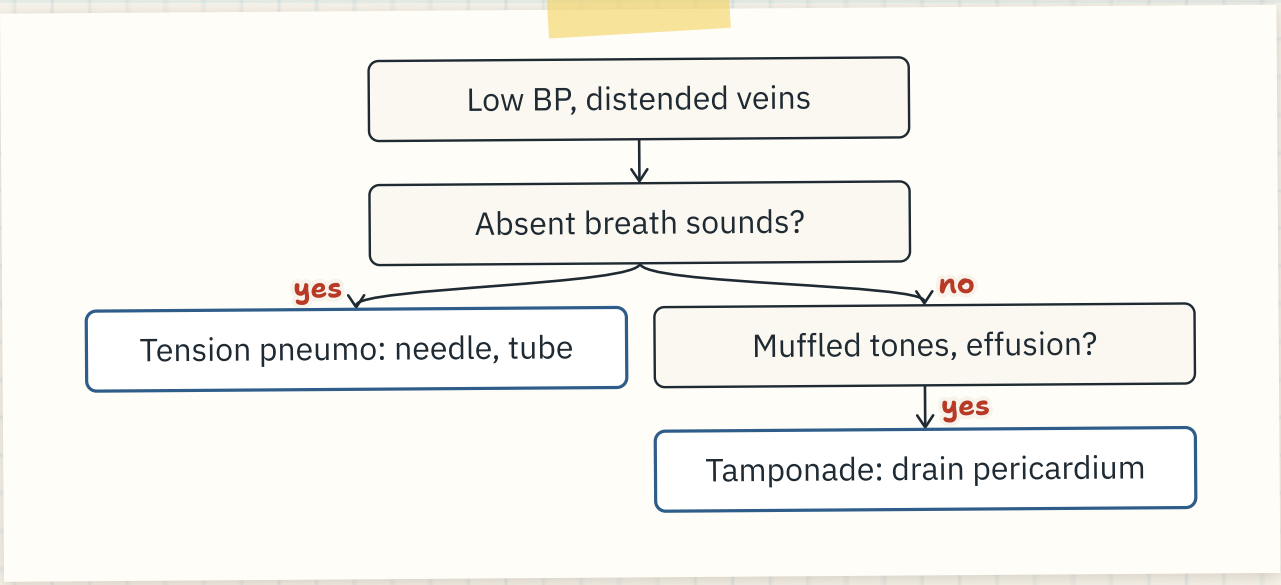
Tension pneumothorax vs tamponade

Two causes of obstructive shock, two different fixes



Step by step

1. Both: low output, raised venous pressure, so remove the obstruction
2. Tension pneumothorax: clinical diagnosis, no x-ray first
3. Needle decompression, then chest tube
4. Tamponade: pulsus paradoxus, systolic fall of more than 10 mm Hg on inspiration
5. Pericardiocentesis; surgery more definitive in trauma

Finding	Tension pneumothorax	Tamponade
Breath sounds	One side absent	Equal
Percussion	Hyperresonant	—
Trachea	Shifts away (large)	—
Heart sounds	—	Muffled
Ultrasound	—	Effusion, RV collapse
Fix	Needle, then tube	Drain pericardium

Bedside separation

Rule of thumb

One-sided absent breath sounds: pneumothorax

Equal breath sounds, muffled heart: tamponade

Speed matters more than volume: about 2 L slow, about 150 mL fast

Exam traps

- Do not wait for a chest x-ray in tension pneumothorax.
- Beck's triad is often incomplete: do not wait for all three.
- A vasopressor alone leaves the obstruction in place.

Tension pneumothorax vs cardiac tamponade: obstructive shock

Video, written lesson, practice question and sources: medservatory.com/usmle-step-2-ck/emergency-acute-care/tension-pneumothorax-vs-cardiac-tamponade-obstructive-shock

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