

Chapter 7

CHEST TUBES

Indications

- Pneumothorax
- Hemothorax
- Empyema

Contraindications

- No absolute contraindications
- Relative contraindications
 - coagulopathy
 - thrombocytopenia
 - transudative effusion

Complications

- Infection
- Bleeding
- Lung injury
- Misplacement
- Pain

Tools



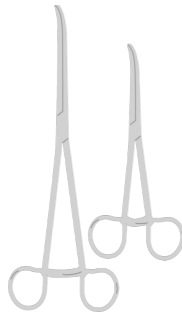
Sterilizing solution



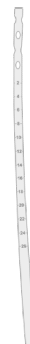
Anesthesia



Scalpel



Kelly clamps



Chest tube

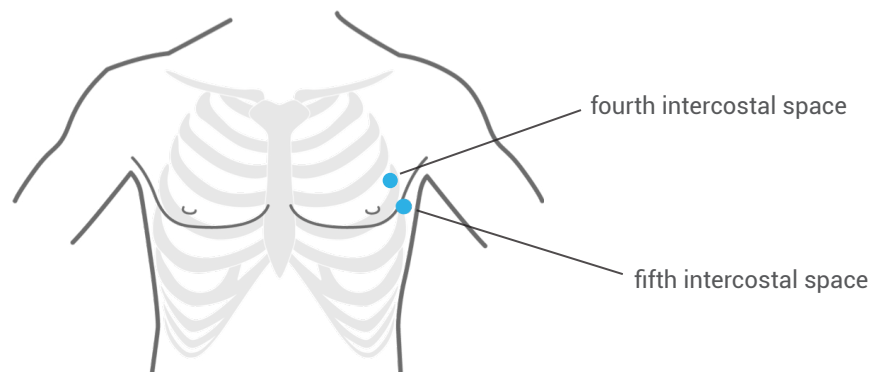


Needle driver



Zero suture

Insertion sites



Procedure

1. Apply local anesthetic (e.g., lidocaine)
2. Make incision 1.5 times diameter of tube
3. Place large Kelly clamp into pleural space
4. Spread clamp slightly to approximate size of chest tube
5. Withdraw clamp
6. Place finger into cavity and confirm you're in pleural space
7. Pass tube into pleural cavity using Kelly clamp
8. For a pneumothorax, guide the tube anteriorly and superiorly toward lung apex



Always use sterile technique

Post-procedure

1. Connect to suction
2. Suture tube in place
3. Place dressing
4. Obtain chest x-ray

Pearls



- Use needle or finger decompression to rapidly treat tension pneumothorax in unstable patient
- Consider using Seldinger technique (pigtail catheter) in non-trauma situations (e.g., spontaneous pneumothorax or pleural effusion)
 - less painful
 - smaller incision