The Do’s and Don’ts of Pediatric Chest Tubes

Julie Torsone, MSN, CPNP
WakeMed Children’s Hospital
Raleigh, NC

ANATOMY

- To remove air or fluid
- To allow the lung to re-expand and promote gas exchange
- To prevent air or fluid from re-accumulating
Before Tube Placement, Don't Forget To:

- Gather all needed supplies
- Provider should obtain informed consent
- Premedicate patient
- Perform time out/identify correct side
- Review institution chest tube

After Tube Placement, Don't Forget To:

- Ensure the tube has an occlusive, secure dressing
- Band the chest tube to pleurevac tubing
- Document markings/how far tube is in chest
- Assess lung sounds for resolution of symptoms
- Assess for air leak
- Assess for SQ emphysema
- Obtain CXR to ensure proper positioning and evacuation of air/fluid
- Keep emergency supplies at the bedside.

tPA: Who/When

- tPA: tissue plasminogen activator (breaks down clots)
- In the US, use alteplase:
  - 0-39kg 0.1mg/kg (max 3mg) mixed in 10-30ml NS intrapleural (Hawkins, 2004)
  - 40kg+ is 4mg mixed in 40ml NS intrapleural (St Peter, 2009, Islam, 2012)
- First dose at time of placement with one hour dwell time. Give once daily x 3 days (total of 3 doses).
Chest Tube
Troubleshooting and Scenarios

What if……..

• If a trauma patient presents to the ED with an open pneumothorax, do you put a dressing over it?
• If your patient has a pneumothorax and a chest tube, can you clamp the chest tube for a trip to radiology?
• Who is at the highest risk of a tension pneumothorax? Why? What are symptoms?

What if……..

• What do you do if you see bubbling in your water seal chamber? What if you don’t?
• What do you do if you see bubbling in your suction control chamber? What if you don’t?
What if……

• What do you do if your chest tube patient suddenly has a change in respiratory status?
• What do you do if the chest tube is accidently dislodged?
• What happens if your chest tube becomes disconnected from the pleurevac system?

What if……

• Do I clamp the tube if I need to change out the unit?
• What do I do if I have a sudden increase in bloody output from my mediastinal tube?
• What if my drainage suddenly stops?

What if……

• What if I don’t have 2cm of water in my water seal chamber? Or I don’t have 20cm of water in my suction chamber?
• What if I see fluid moving up and back in the tubing while my patient takes a breath in my patient with a pleural chest tube?
What if……

• Should I expect to see bubbling in the water seal chamber in my patient who has a mediastinal chest tube?

• Is it better to have vigorous bubbling in my suction chamber (turn up the wall suction to high?)

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