



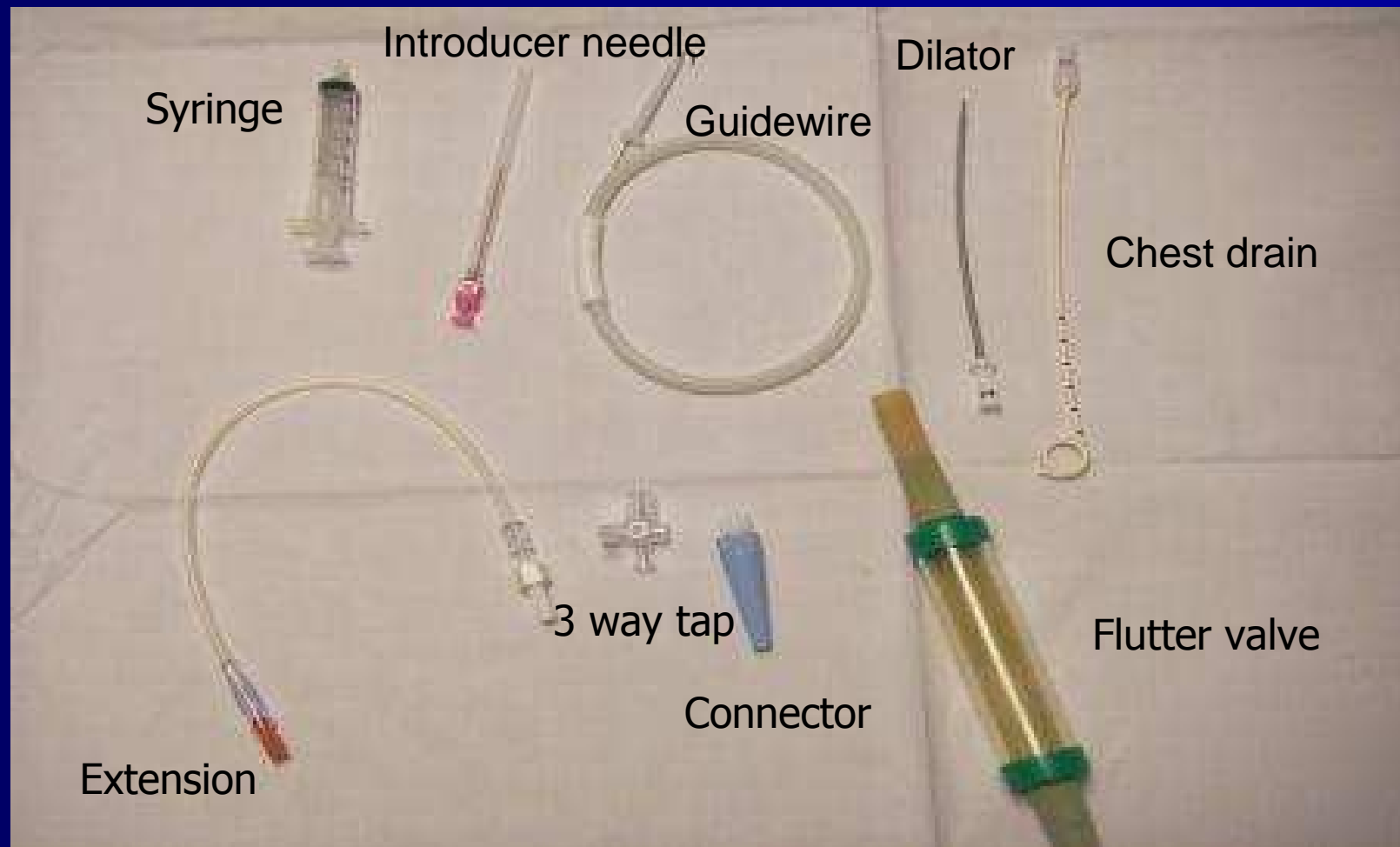
How to Insert “Cook” Seldinger Chest drains

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Contents

- Equipment required
- Analgesia
- Identify location
- Insert needle introducer
- Advance guidewire
- Dilate skin
- Insert drain
- Secure
- How to remove
- Acknowledgements

Equipment required



Step One- analgesia

- Ensure the baby has adequate analgesia
 - Consider using morphine bolus if ventilated, or if not, low dose fentanyl (watch for chest wall rigidity), lignocaine locally.

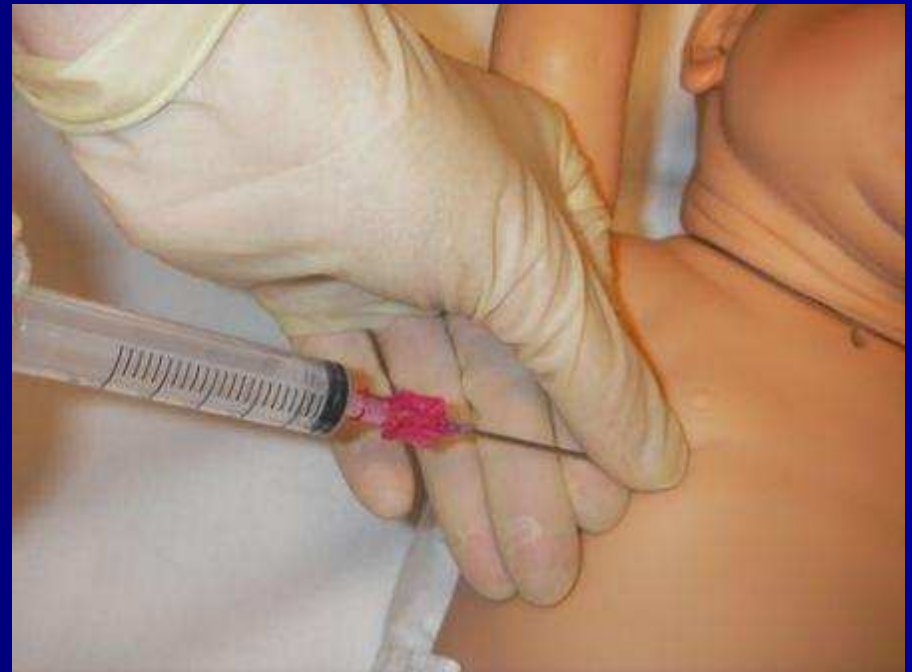
Step two-aseptic technique

- Use sterile gloves and gown
- Identify site for insertion
- Clean the skin using chlorhexadine



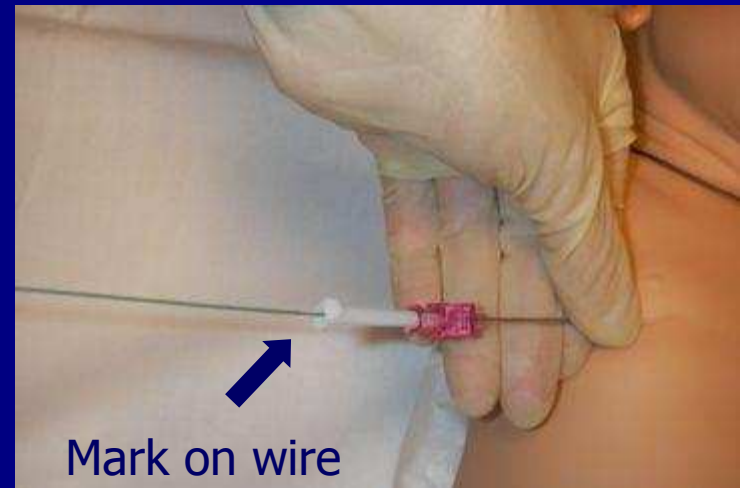
Step 3- Insert needle

- Select the location for the chest drain
 - Usually 5th intercostal space, anterior axillary line
- Insert the needle whilst aspirating syringe
- Stop advancing once air aspirated (less than 1cm)



Step 4- Insert wire

- Pass the wire through the needle as far as the mark on the wire



Mark on wire

- Holding the wire still, remove the needle
- NB take care to keep the equipment sterile at all times- this may require an assistant to “control” the wire.



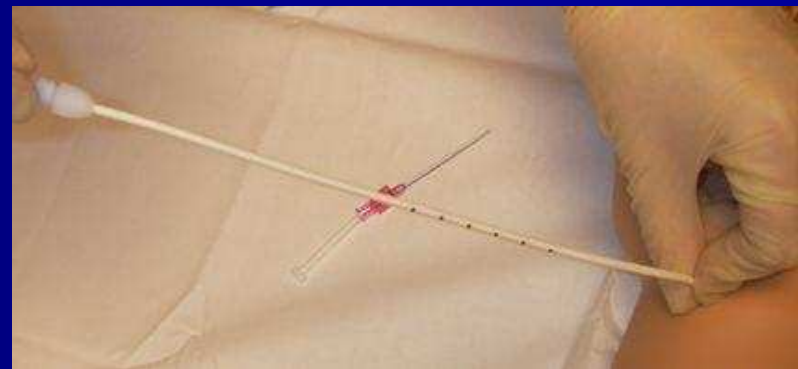
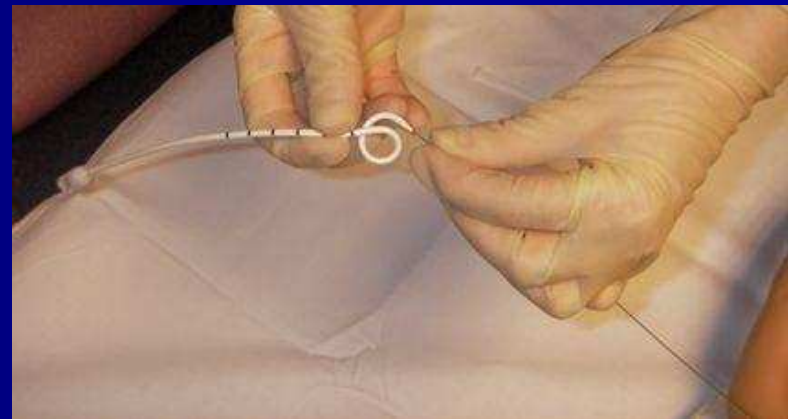
Step 5- dilate the skin

- Pass the dilator along the wire
- Push the dilator through the skin about 1cm, angling anteriorly
- The skin may require a small incision
- Following dilation, the dilator can be removed
- NB at all times the wire must be held still, not advanced or withdrawn



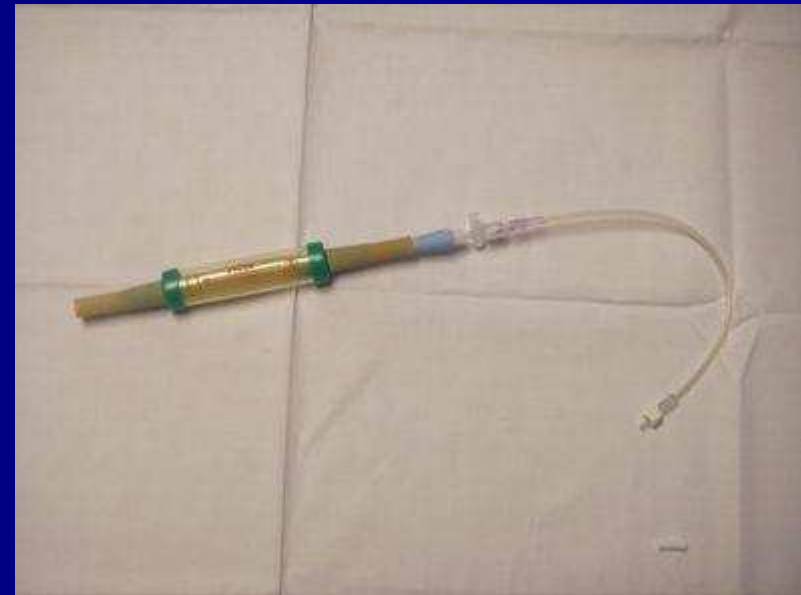
Step 6- insert the drain

- The drain should be advanced over the wire (this often needs an assistant)
- The drain should be advanced through the skin so the holes are inside the baby
- The wire can now be removed



Step 7- add the flutter valve

- Assemble drainage equipment
 - Extension
 - 3 way tap
 - Connector
 - Flutter valve (ensure



- The valve/underwater drain now needs to be attached to the end of the drain

Step 8- Secure the drain

- The drain should be carefully secured
- DO NOT use a purse string suture- it leaves an ugly scar
- A suture can be placed through the skin and knotted to the drain
- The drain can then be secured with a tegaderm securely

How to remove

- Wear personal protective equipment
 - ie gloves, eye protection
- Remove sutures tegaderm
- Gently pull the drain- the pigtail will uncurl
- Beware of splashing body fluids- as the drain comes out of the skin, the pigtail will spring back

Acknowledgements

- Dr R Ranganna for photography