

PAEDIATRIC NURSING PRACTICE MANUAL
SECTION 7

CARE OF THE CHILD WITH A RESPIRATORY CONDITION

7.3 INTERCOSTAL CATHETER CARE

7.3.5 ASPIRATION OF AN INTERCOSTAL PIGTAIL CATHETER

Aims

1. To remove fluid from the intercostal or pericardial space.
2. To obtain a specimen.

Key points

1. Pigtail catheters can be used for removal of fluid or air from the pleural space and are less traumatic and uncomfortable for patients compared to large-bore tubes.¹⁻³
2. This procedure is only for aspiration of fluid from a pericardiocentesis pigtail catheter which has a 3-way tap attached.
3. The frequency of aspiration will be determined by medical staff.
4. This procedure requires an aseptic non touch technique using sterile equipment and a critical aseptic field.
5. To remove a pigtail catheter refer to [PNPM 7.3.4](#) Removal of an Intercostal Catheter.

Equipment

Dressing trolley
70% Alcohol (for decontaminating trolley)
Dressing pack
Sterile gloves
Sterile 20mL luer lock syringe
Swabbing solution or swabs: 2% Chlorhexidine/70% isopropyl alcohol
Sterile luer lock cap
Kidney dish
Waste bag

Additional equipment which may be required

Sterile specimen container

PROCEDURE	ADDITIONAL INFORMATION
<p>Perform hand hygiene.</p> <p>Decontaminate trolley with alcohol 70% alcohol or sporacidal detergent if visibly soiled (Tuffie wipe). Allow to dry.</p> <p>Gather equipment.</p>	

PROCEDURE	ADDITIONAL INFORMATION
<p>Repeat hand hygiene.</p> <p>Open dressing pack and empty equipment carefully on to the aseptic field.</p> <p>Don sterile gloves.</p>	
<p>Place the sterile drape under the 3-way tap.</p> <p>Using two pieces of opened gauze soaked with the swabbing solution, or two large chlorhexidine/alcohol swabs clean the 3-way tap.</p> <p>Allow to dry.</p>	<p>Sterile drape is found in the dressing pack.</p> <p>Discard swabs directly into waste bag.</p>
<p>Remove the cap from the 3-way tap and discard.</p>	
<p>Attach the syringe to the tap.</p> <p>Using gentle pressure aspirate fluid.</p>	<p>A 20mL syringe should be used for pigtail aspiration.¹</p>
<p>For pleural or pericardial space effusions, continue to aspirate until there is no return.</p>	<p>Aspiration of fluid may be facilitated by altering the child's position to the dependent side.</p>
<p>Take specimen as ordered.</p>	
<p>Repeat cleansing of the 3-way tap with new swabs.</p> <p>Attach a new sterile cap.</p>	<p>It is not necessary to flush the catheter after aspiration.</p>
<p>Discard equipment into clinical waste.</p> <p>Decontaminate trolley with sporacidal detergent (Tuffie wipes).</p> <p>Remove gloves and perform hand hygiene.</p>	
<p>Document amount of aspirate on the Fluid Balance Chart.</p> <p>Reassess patient's respiratory status.</p>	<p>Report large volume aspirates.</p>
<p>If removal of the pigtail catheter is requested by the treating medical officer, follow procedure as per PNPM 7.3.4 Removal of an Intercostal Catheter</p>	

All protocols should be read in conjunction with the disclaimer in the preface of this manual

Aspiration of an Intercostal Pigtail Catheter

References:

1. Jain S, Deoskar Lt Col RB, Barthwal Lt Col MS, Rajan Col KE. Study of Pigtail Catheters for Tube Thoracostomy MJAFI.62(1):40-41; 2006.
2. Cates L. Pigtail catheters used in the treatment of pneumothoraces in the neonate [Literature Review]. Adv Neonatal Care.9(1):7-16; 2009.
3. Pierrepont M, Evans A, Morris S, Harrison SK & Douillet IJ. Pigtail catheter drain in the treatment of empyema thoracis [Level III-3]. Archives of Disease in Childhood.87(10):331-332; 2002.

Bibliography:

- Liang S et al. Application of ultrasound-guided pigtail catheter for drainage of pleural effusions in the ICU (Level III-2). Intensive Care Medicine 2010; 35: 350-354