



Crumlin | Temple Street | Tallaght | Connolly

GUIDELINE ON THE INSERTION AND CARE OF A DUAL FLOW GASTRIC DECOMPRESSION

Area of use:	All of organisation <input checked="" type="checkbox"/>	CHI at Connolly <input type="checkbox"/>	CHI at Crumlin <input type="checkbox"/>
	CHI at Herberton <input type="checkbox"/>	CHI at Tallaght <input type="checkbox"/>	CHI at Temple Street <input type="checkbox"/>
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1.0 Introduction

A Dual Flow Gastric Tube is a radio-opaque double lumen tube used for gastric decompression for either conservative or surgical management of a child presenting with an acute abdomen. It can be used both to provide continuous low-pressure suction, or intermittent drainage of gastric fluid and air.

2.0 Definition of Guidelines

Guidelines represent the written instructions about how to ensure high quality services are delivered. Guidelines must be accurate, up to date, evidence-based, easy to understand, non-ambiguous and emphasise safety. When followed they should lead to the required standards of performance

3.0 Applicable to

This guideline is applicable to the nursing care of a child presenting with an acute abdomen requiring gastric decompression for either conservative or surgical management.

4.0 Objectives of the Guidelines

The purpose of this guideline is to promote safe, efficient and consistent practice in relation to the insertion and management of a Dual Flow Gastric Tube.

5.0 Definitions / Terms

Dual Flow Gastric Tube

A Dual Flow Gastric Tube is a double lumen radio-opaque tube, which is inserted nasally into the stomach. The tube consists of a wide bore drainage outlet and a smaller air inlet, which is left open to the air to maintain suction and atmospheric pressure reducing adherence to the mucosal wall.

Continuous Low Pressure Suction

Continuous suction is where air, gastric and/or intestinal contents are withdrawn continuously with low pressure allowing no time for them to accumulate.

Intermittent Drainage

This is where the wide bore drainage port is spigotted closed with a clear closed spigot, and then aspirated with a syringe at regular intervals or as per instruction.

Free Drainage

This is where the wide bore port is attached to a drainage bag continuously allowing drainage of air and gastric contents as needed without requiring suction. The air inlet is closed using a closed spigot.

Acute Abdomen

Sudden onset of abdominal pain requiring urgent evaluation, diagnosis and treatment.

6.0 Guidelines

Insertion of Dual Flow Gastric Tube

Equipment

- Plastic apron
- Disposable latex free gloves
- 1 10ml syringe or 60ml syringe if aspiration is required
- pH paper (range 0-6)
- Lubricant
- Vygon Dual Flow Gastric Tube – appropriate size
- Skin protector Duoderm
- Tagerderm – to secure tube
- Emesis bowl, tissues

The size of a Dual Flow Gastric Tube should be determined by clinical assessment based on the size of the patient, clinical need and in collaboration with the surgical team.

A pre medication maybe required in certain circumstances.

Placing of the Dual Flow Gastric Tube

ACTION	RATIONALE & REFERENCE
Passing of a Dual Flow Gastric Tube may require 1-2 people during the procedure depending on the child.	
Obtain verbal consent by explaining the procedure appropriately to the child and parent or carer.	Appropriate explanations can help gain trust, co-operation and reduce fears (Ball et al 2017)
Set out equipment, checking expiry dates and ensuring equipment is intact.	It is important to prepare your environment to ensure a smooth procedure (Trigg & Mohammed 2010)
Place on disposable apron and decontaminate hands thoroughly. Throughout the Replogle placement, please use Aseptic Non-Touch Technique level 3.	
Open packages and cut tapes to size.	
Position the child if able in a 45-degree angle or in the sitting position. The child may need to be held or supported.	This will allow for easier swallowing to help facilitate passage of the tube. (Dougherty & Lister 2011) Holding the child will prevent sudden movement ensuring a safe insertion of the tube.
To measure the tube, place the tip of the tube at the nostril and extend the tube to the bottom of their ear lobe and then downward midway between the xiphoid process and the umbilicus. Take note of the number on the tube corresponding to the length measurement.	

Place a strip of duoderm to the cheek, which the Dual Flow Gastric Tube will sit on once in place and secured.	
Lubricate the tube slightly prior to insertion and then steadily insert the tube up the nostril angling it slightly upwards to advance it along the base of the nose into the pharynx and continue to glide the tube until you get to the required measurement (encourage swallowing using sips of water or via a soother dependent on the age of the child). The tube should now be in the stomach.	Swallowing eases the passage of the tube and reduces the risk of insertion into the trachea (Howe et al 2010)
Check the child’s mouth to ensure the tube is not coiled in their throat.	This will help to ensure correct positioning,

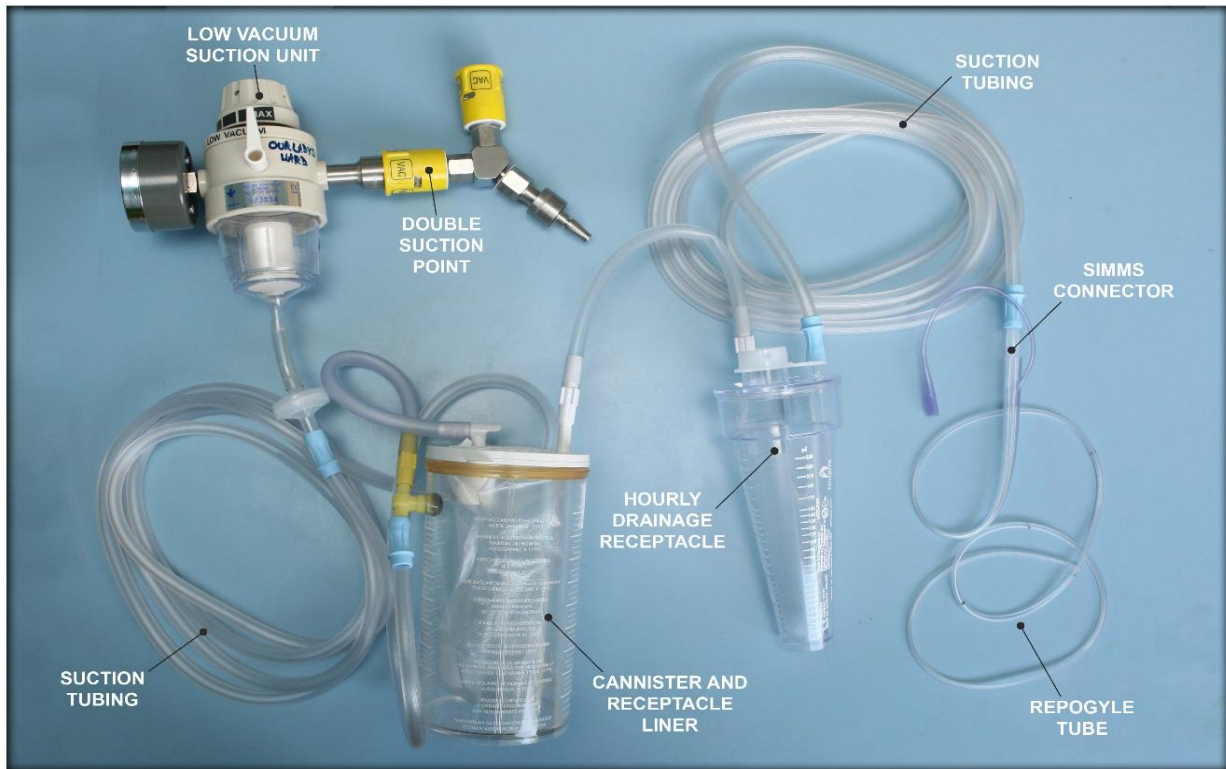
TUBE PLACEMENT CONFIRMATION	
One nurse will hold the tube in place while the 2 nd nurse confirms PH position.	
Use a closed Spigot in air inlet while checking aspirate. DO NOT KNOT THE AIR INLET (see appendix 1 & 2)	
Aspirate the Dual Flow Gastric Tube using a catheter tip 60 ml syringe by applying gentle negative pressure.	Aspiration of stomach contents indicates the pressure of the tube in the stomach (Clynes & O’Connor 2010, NPSA 2011)
Test aspiration fluid with PH Paper and match colour change of the strip with the colour code reference on the box to identify the stomach content PH.	A PH reading of 0-5.5 indicates contact with stomach contents and verifies the tube position. (Bunford 2010)
Once correct position is determined, secure the tube onto the child with adhesive tapes. A skin protector or hydrocolloid dressing may be applied to the child’s cheek prior to securing the tube.	To Prevent skin reaction damage (Bunford 2010)
Remove closed spigot if tube is for Low Pressure Suction.	
Dispose of equipment appropriately and document tube insertion, depth of tube and side it is inserted,	

Low Pressure Suction Set Up:

Equipment

- Low pressure suction regulator unit
- Suction tubing * 2
- Hourly receptacle measuring canister
- Standard suction canister
- Sims connector (if not with tubing package)
- Double suction point (to allow for both regular and low-pressure suction.)

Set up as picture below



NB: The Vygon Dual Flow Gastric Tube needs to be changed every 7 - 10 days as per manufactures guidelines.

Management and Care of a Dual Flow Gastric Tube on low pressure suction

- Ensure suction tubing and drainage canisters are below patient level to ensure effective drainage with gravity.
- Air inlet must be left open at all times while drainage port is connected to low pressure suction.
- Set the low suction pressure at the lowest KPA level required to provide adequate drainage- usually suction needed would be between 5-10 KPA. This may need to be altered depending of contents consistency and volume.
- Repogyle losses need to be measured and recorded hourly in the appropriate section on the IV fluid chart. This is done by reading the level on the hourly drainage receptacle and then emptying this into the main suction canister. Colour and consistency of output should be regularly monitored and documented appropriately in nursing documentation.
- Repogyle Losses need to be replaced hourly and documented on the IV Fluid chart (unless otherwise instructed by surgical team) using 0.9% NACL & 10mmol KCL in 500 mls. This is the standard replacement fluid used in CHI at Crumlin. Losses are replaced ml/ml unless otherwise directed by surgical team. These replacement fluids must be prescribed on the patient's kardex.
- Patients require daily monitoring of Urea and Electrolyte bloods.
- An IV PPI should be prescribed while on low-pressure suction as per surgical team.

Troubleshooting

- If the air inlet leaks whilst the Dual Flow Gastric Tube is on low-pressure suction this usually indicates a blockage. If this occurs, do not clamp the air inlet.
- Aspirate the main drainage port, check for a PH of less than 5.5 and then flush the drainage port with 5 mls of sterile water.
- Re – attach to the low-pressure suction and check to see if leakage has stopped.
- If patient complains of feeling nauseous and / or vomiting, check tubing for kinks, ensure wall suction is working and set up correctly, aspirate the drainage port to ensure it is not blocked. Suction level may need to be increased to prevent further vomiting.

7.0 Implementation Plan

Guideline will be approved and placed on the hospital intranet and circulated via NPDU

8.0 References

Ball.J, Bindler.R, Cowen.K & Shaw.M (2017) *Principles of Pediatric Nursing. 7th Edition*. Pearson Education.

Bunford.C, (2010) Feeding 2. Enteral Feeding *In Practices in childrens Nursing: Guidelines for community and Hospital. 3rd Edition*. Trigg,E & Mohammed TA Eds), Churchill Livingstone, Eddinburgh, 388-400

Clynes. M & O'Connor. C (2010) Gastrointestinal System. *In Clinical Skills in childrens Nurisng*. (Coyne I, Neill. F, & Timmons F Eds) Oxford University Press, Oxford 327-334

Dougherty L & Lister S (2020) *The Royal Marsden Hospital Manual of Clinical Procedures. 10th Edition*. Wiley Blackwell, Oxford.

Howe.R, Forbes.D & Baker.C (2010) *Providing optimum nutrition and hydration in developing practical skills for nursing children and young people*. (Glasper A, Aylott.M, & Battrick.C Eds) Hodder Arnorld Publishers LTD, London 203-219.

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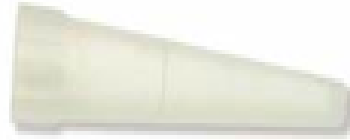
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9.0 Appendices

Appendix 1 – Air Inlet



Appendix 2 – Closed Spigot



Appendix 3 - Where to record GI Losses and Replacement for Losses given

GI Losses recorded here please

Replacement for losses given recorded here

CHI Children's Health Ireland

Addressograph label

IV F

Date: 6-01-2023 Ward: Our Lady's Ward

Recent weight: 4.6 kg
= Weighed: 16/1/2023
= Estimated: / /

Time	FLUID INPUT (ml)										FLUID OUTPUT (ml)															
	Fluid 1	Fluid 2	Fluid 3	Fluid 4	Fluid 5 (Opioids)	Level of Storage	Rate/hr	Amount infused (ml)	% Total	Total	PO	External	Stool	Urine	GI losses	Urine	Stool	Drain 1	Drain 2	Drain 3	Replacement for losses	Total Output	Fluid Balance	MA		
06:00	82	82	80	70		62	1.0	153	153	N	0			153	30	30	65	65				70	70	70		
07:00	82	82				67	1.0	83	236		0			236	25	65	50	80	125				70	70	40	
08:00	82	82				66	1.5	84	320	N				320	35	80	70	175	175				15	15	55	
09:00	82	82				66	1.0	83	403	N				403	50	140	45	240	240				45	45	90	
10:00	82	0	50	160		63	1.1	112	515	N				515	65	146	70	30	140				50	50	140	
11:00	82	82				61	1.0	83	468	N				468	40	225	50	240	90				45	45	185	
12:00	82					60				N													40			

Fluid 1: 0.9% NaCl + S/D
Fluid 2: IV Medication + Flush
Fluid 3: Additive
Fluid 4: Additive
Fluid 5 (Opioids): Morphine

Total Fluids/kg/Day
Feed Type: Vol Frequency
Total Feeds/kg/Day Total IV Feeds/kg/Day

Replacement fluid: 0.9% NaCl + S/D + 10ml/kg/day
*Specific instructions
*Use like pathway, CHD losses normally checked in giving sets, infusion using battery and plugged in.

Total Intake
Total Output
Balance 24 Hrs.

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