

# Guideline

## Insertion and management of a Replogle tube

### 1 Scope

For use within the Paediatric and Neonatal Decision Support and Retrieval Service (PaNDR) for the East of England.

### 2 Purpose

To provide safe, efficient and practical guidance for the insertion of a Replogle tube for management of neonates with oesophageal atresia +/- tracheo-oesophageal fistula during stabilisation and transfer.

### 3 Definitions and abbreviations

Choanal atresia	A rare condition, present from birth where the nasal passages are blocked by bone or tissue
IV	Intravenous
kPa	Kilopascal – a unit of pressure measurement
mmHg	Millimetres of mercury – an alternate unit of pressure measurement
Radio-opaque	A material that blocks the passage of x-rays therefore appearing white on a conventional x-ray

### 4 Introduction

A Replogle tube is a double-lumen, radio-opaque tube which is used most commonly in the management of babies with oesophageal atresia. It allows continuous suction and irrigation of the blind-ending upper pouch of the oesophagus which reduces the risk of saliva/ secretions overflowing into the trachea.

Ensure that the parents understand the reasons for passing the Replogle tube and what the procedure involves prior to insertion.

## 5 Equipment

- Replogle tube (Argyle size 8 or 10 Fr)
- Low pressure suction pump with suction tubing
- IV 2 or 5ml syringe
- 0.9% sodium chloride ampoules
- Duoderm
- IV tegaderm dressing

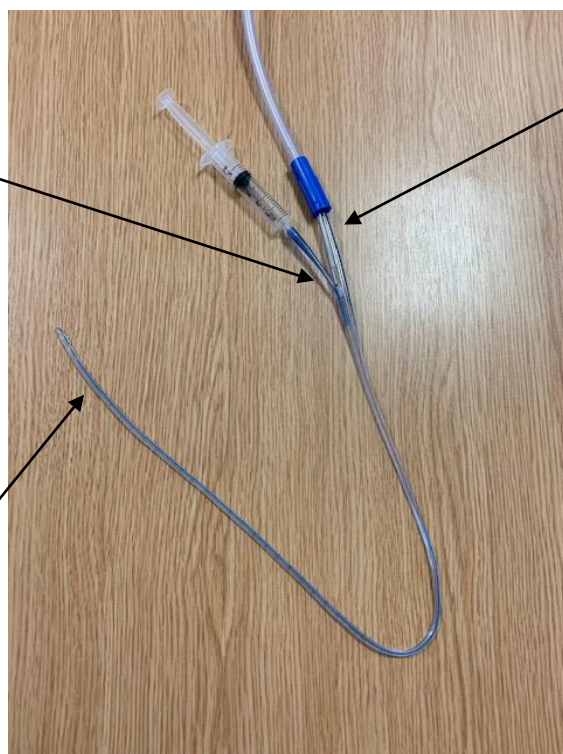
## 6 Method

- The preferred route is passing the Replogle tube through the nostril. It is easier to secure and more comfortable for the infant. Sometimes it may be necessary to pass the Replogle tube orally eg if the baby is very small, has choanal atresia or is requiring non-invasive ventilation.
- Perform hand hygiene and put on non-sterile gloves and apron
- Suction the nose and mouth to clear any secretions.
- Gently pass the Replogle tube until resistance is felt (this should be the blind end of the pouch). Pull the Replogle tube back slightly to reduce the risk of trauma and adherence to the oesophageal wall.
- Cover the skin with a protective layer of duoderm to protect the skin and secure the Replogle tube with IV tegaderm.
- The larger lumen of the Replogle tube should be connected to suction tubing which is connected to a low flow suction unit. It is best practice to use the lowest level of continuous suction to remove secretions without compromising the patient's condition – for the incubator suction unit this is 50mmHg (6.67kPa) and for the ambulance suction it is 40mmHg (5.33kPa). The suction can be increased to a maximum of 80mmHg on a case by case basis after discussion with the covering PaNDR consultant if the secretions are not being adequately cleared, being mindful that this increases the risk of damage to the soft tissues of the upper pouch.
- Ensure the suction tubing is securely anchored in the cot/ incubator to prevent accidental dislodgement.
- Secretions should be observed starting to drain along the Replogle tube and into the suction tubing.
- Instill 0.5ml of 0.9% sodium chloride into the small blue lumen of the Replogle tube to facilitate the continuous drainage of secretions.
- Clear away equipment and perform hand hygiene to minimise the risk of cross infection.

- Label the Replogle tube with the date and depth of insertion.
- 0.5mls of 0.9% sodium chloride should be instilled every 15 minutes into the small blue lumen of the Replogle tube to prevent blockage and possible aspiration of secretions. The syringe should be removed between flushes so that 0.9% sodium chloride cannot be inadvertently sucked into the tube if the Replogle tube blocks.
- Observe baby for signs of blockage or displacement of tube i.e. flushes not being returned, coughing, cyanosis and desaturation. Baby should be observed for signs of distress – tachypnoea, recession and nasal flaring.
- Update parents.

The smaller blue lumen is used to flush the Replogle tube with 0.5ml of 0.9% sodium chloride as described above.

The larger lumen is connected to suction tubing and low flow suction as described above.



This part is gently inserted into the baby's nostril until resistance is felt, then pulled back slightly and secured.

## 7 Conversion rate for different units of suction

kPa	mmHg	cmH2O
1	7.5	10.2
2	15	20.4
3	22.5	30.6
4	30	40.8
5	37.5	50.99
6	45	61.2
7	52.5	71.4

## 8 Monitoring compliance with and the effectiveness of this document

The effectiveness of the document will be monitored by review of any reported incidents via the lead nurse for risk. These incidents will be shared with the team and consideration given to adjusting the guideline if concerns are identified.

## 9 References

- Cambridge University Hospitals NHS Foundation Trust (2018) Care of the Replogle tube

## 10 Associated documents

- PaNDR guideline Stabilisation and transfer of an infant with oesophageal atresia +/- trachea-oesophageal fistula  
<http://pandreastofengland.co.uk>

## Equality and diversity statement

This document complies with the Cambridge University Hospitals NHS Foundation Trust service equality and diversity statement.

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## Document management

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