



CLINICAL GUIDELINE

**Inguinal Hernia: Non-Strangulated and Strangulated**

<b>Scope (Staff):</b>	Nursing and Medical Staff
<b>Scope (Area):</b>	NICU KEMH, NICU PCH, NETS WA

This document should be read in conjunction with this [DISCLAIMER](#)

### Non-Strangulated (Non-Obstructed) Inguinal Hernia

Inguinal hernia repair is the most common operation performed on premature infants. If it is easily reducible and causing no other problems, it is recommended that it is operated on shortly before the infant's discharge home.

#### Clinical Presentation

- Painless swelling in the inguinal region (can extend to scrotum in males, or to labia in females) secondary to persistence of a wide processus vaginalis, with herniation of bowel (or, in females, the ovary).
- More common in males (only 12% of cases are in females). In boys 60% are on the right, 25% on the left and 15% of cases are bilateral. The swelling is reducible.
- More common in premature infants and in infants with raised intra-abdominal pressure.
- May feel an impulse on crying straining or coughing. It is often difficult to define the upper margin of the swelling. The lump may transilluminate.

**Differential Diagnosis:** Hydrocoele

#### Management

- For the asymptomatic infant with a reducible hernia, complete the non-obstructed inguinal hernia [referral form](#) and fax to the department of surgery. Referral is to be confirmed with Senior Registrar / Consultant prior to sending.
- This form should be sent when the diagnosis of inguinal hernia is made.
- The timing of surgery should be arranged when almost ready for discharge.
- Document date of surgery when known.
- Confirmation of hernia is to be confirmed by Senior Registrar / Consultant **prior** to transfer to PCH for surgery.
- Inguinal hernia repair is necessary because of the danger of strangulation. Strangulated inguinal hernias occur most commonly in the first 6 months of life.
- On Weekly physical assessment checks the presence or absence of the inguinal hernia should be documented.
- If hernia is not detected again, on discharge parents must receive education and an [information sheet](#) regarding actions required if re-herniation occurs.

- Outpatient appointment is to be made for 2 weeks post discharge. Country patients should see the Surgeon prior to discharge.
- If hernia is present, infants can only be discharged with approval from Surgical Consultant.

### **Strangulated (Obstructed) Inguinal Hernia**

A loop of small bowel becomes trapped in the hernial sac. Early reduction is important to save the trapped bowel and also the testis on the same side. The testicular vessels can be severely comprised by a tense hernia in infants.

#### **Clinical Presentation**

- Inconsolable crying and a lump in the inguinal region.
- The lump is often tense, tender and not reducible.
- There may be vomiting and abdominal distension.
- The infant may deteriorate so careful monitoring and prompt intervention is necessary.

#### **Management**

- Notify senior medical staff and parents.
- Consult the on call PCH Surgical team urgently.
- Stop feeds, Insert IV, take FBC, CRP, blood culture, blood gas, blood group and hold.
- Start IV fluids (may need fluid boluses).
- Pain assessment.
- Start IV antibiotics (Vancomycin/Gentamicin in general).
- Insert NGT onto straight drainage.
- Pain assessment.
- Consider abdominal x-rays.
- Liaise with 3B regarding transport and parent accommodation (if necessary).

During fetal life the testes develop in the abdomen. The testes gradually descend through the “inguinal canal” into the scrotum, taking with them a pouch of peritoneum. If this pouch persists the intestine can descend into the canal or scrotum creating an inguinal hernia. If fluid only passes through the canal a hydrocele develops. Hernia’s can be transient therefore clear documentation at time of examination is required to assist with Surgical review. Ultrasound examination may be helpful with diagnosis. The hernias require repair as they can become trapped in the inguinal canal, incarceration can result in loss of blood supply to the intestines, testicles or ovary. An Incarcerated Hernia is a surgical emergency. Surgical repair is via a small incision over the inguinal area the sac is located and tied off.

#### **Pre-Operative Care**

- Routine [Pre-Operative Care](#).
- Insert peripheral IV to assist with pre anaesthetic care.
- Fast 4 hour from formula and 3 hours EBM.

## Post-Operative Care

Routine [Post-Operative Care](#) on return from theatre, include:

- Full cardiac and oxygen saturation monitoring for 24 hours.
- Hourly temperature for 4 hours or until stable, then 4 hourly.
- Hourly blood pressure for 4 hours or until stable, then 4 hourly.
- Blood gas on return from theatre, thereafter as per medical orders.
- After 24 hours observation should be according to the infant's general condition.

## Wound Care

- Observation of wound site for bleeding, swelling and redness for 4 hours or until stable, then 4 hourly.
- The wound site will usually be covered with steri-strips. These should be kept dry for 3 to 5 days.
- If it becomes soiled within the first 5 days the area should be gently cleaned with soap and water and dried.
- The infant can have a bath after 5 days.
- The steri-strips will curl up and fall off. Do not pull them off.

## Pain Relief

- Monitor pain scores. Refer to [Pain Assessment and Management Guideline](#).
- Administer pain relief if indicated (generally Paracetamol as ordered). Consider feeding.

## Feeding

- As per general post-operative guidelines.
- Infants can take oral feeds when awake post anaesthetic if respiratory status is stable.
- Maintain an accurate record of input and output.

### Related CAHS internal policies, procedures and guidelines

Neonatology guideline


- [Pain Assessment and Management Guideline](#)
- [Post-Operative Care](#)
- [Pre-Operative Care](#).

### Useful resources (including related forms)

[Referral Form](#)

[Parent Information Sheet](#)

This document can be made available in alternative formats on request for a person with a disability.

File Path:			
Document Owner:	Neonatology		
Reviewer / Team:	Neonatal Coordinating Group		
Date First Issued:	October 2006	Last Reviewed:	15 <sup>th</sup> November 2019
Amendment Dates:		Next Review Date:	26 <sup>th</sup> November 2022
Approved by:	Neonatal Coordinating Group	Date:	26 <sup>th</sup> November 2019
Endorsed by:	Neonatal Coordinating Group	Date:	26 <sup>th</sup> November 2019
Standards Applicable:	NSQHS Standards: 		
<b>Printed or personally saved electronic copies of this document are considered uncontrolled</b>			