

## NCCU CLINICAL GUIDELINES

### SECTION: 13

## SURGICAL CONDITIONS

Section: 13 Surgical Conditions  
Care of the infant with myelomeningocele  
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Neonatology Clinical Guidelines  
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## CARE OF THE INFANT WITH MYELOMENINGOCELE

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Myelomenigocele occurs when a sac containing the meninge's, spinal fluid and elements of the spinal cord protrude through an open vertebral lesion. It may be covered with skin or thin membrane.

The care of an infant with Myelomenigocele is managed using a multidisciplinary approach co-ordinated by the neonatology, spinal rehabilitation teams, neurosurgery, urology, orthopaedics, physiotherapy and social work. Neonatologist will refer to Spinal Rehabilitation Team (SRT) and Neurosurgeon for closure of lesion. Neurosurgeon will refer to Plastic Surgeon if a flap closure is required.

Surgical closure of open lesion is usually recommended in the first 24 hours to reduce the incidence of infection and trauma to the exposed tissues and preventing stretching of nerve roots.

### KEY POINTS

- Infants with Myelomenigocele have a high risk of developing **latex allergies**. It is therefore important to avoid any contact with products containing latex. Instead, silicon, portex or vinyl gloves, dummies, catheters and teats should be used. Place red name bands on the infant and place an ADR Sticker (Allergies and Adverse Drug Reactions) in the patient's notes and on the medication chart and write 'LATEX'.
- 90 to 95% of infants with an open myelomenigocele will develop hydrocephalus. The presence of Chiari Malformation may contribute to this. Daily monitoring of head circumference and fontanelle size by Medical staff is required.
- Care must be taken to protect the exposed meninges in the spinal lesion until surgical closure can be performed.

### PRE OPERATIVE INVESTIGATIONS AND MANAGEMENT

- The infant must be nursed prone and not dressed to prevent injury to the lesion. Use an incubator or radiant warmer.
- Immediately after delivery the lesion must be covered with a dressing.
  1. Use a silicon based dressing (or a non stick dressing such as paraffin impregnated gauze if silicone is unavailable) and a non adherent dressing pad to protect the lesion. This type of dressing can be lifted for inspection and replaced without changing.
  2. Hold in place with a surgifix **stocking**.
  3. Protected from soiling with a plastic flap. Care should be taken to prevent contamination as potential for infection is high. Minimal tape should be applied to the skin due to sensitivity to tapes and to prevent dermal stripping. Avoid use of sleek.
- Ultrasound examination of the head and kidneys. (Note: MRI of head and spine, this may be ordered post operatively when the infant can lie supine).

- Liaise with the Spinal Rehabilitation Team regarding treatment, education and assessment of motor function.
- Support the family with good communication and information.

## POST OPERATIVE CARE

1. Nurse prone, routine post operative observations and pain relief.
2. Daily head circumference
3. **Wound care:** Dressing left intact as per post op orders of Neuro and Plastic Surgeons. Refer to Stomal Therapy/SRT Nurse for wound management issues.
4. **Preventative care for excoriation of the peri anal area due to incontinence:** Use paraffin with each nappy change, Refer to Stomal Therapy/SRT Nurse if further treatment is required.
5. **Bladder Care:** Urinary retention is common in children with Myelomenigocele due to abnormal innervation of the bladder causing a neurogenic bladder. Investigations of ultrasound and MCU required when infant is stable. The SRT Nurse will measure residual urine volumes to establish presence of urinary retention. If necessary routine intermittent urinary catheterisations should be performed as ordered. Please follow PNPM guidelines

[Insertion of an intermittant urinary catheter \(For Parents\)](#)

[Urinary catheterisation: Insertion and management \(Nursing staff\)](#)

## NEURO-UROLOGY PROTOCOL FOR OPEN SPINAL LESIONS

- Neonatal team to organise ultrasound; Urinary tract & spine / Head  
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- Surgery (closure of lesion)  
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- Indwelling catheter to be inserted at time of surgery – to remain until MCU or until assessment of bladder function (Can be removed at end of MCU)
- Treatment course of Trimethoprim to commence on catheter removal
- Followed by Trimethoprim Prophylaxis 2mg/kg  
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- Spinal Liaison Nurse assessment (2 – 3 hours with nappy alarms)
- CIC to commence if significant persistent residual  
↓
- Follow up at 1 month. Ultrasound & CNS review of Bladder function

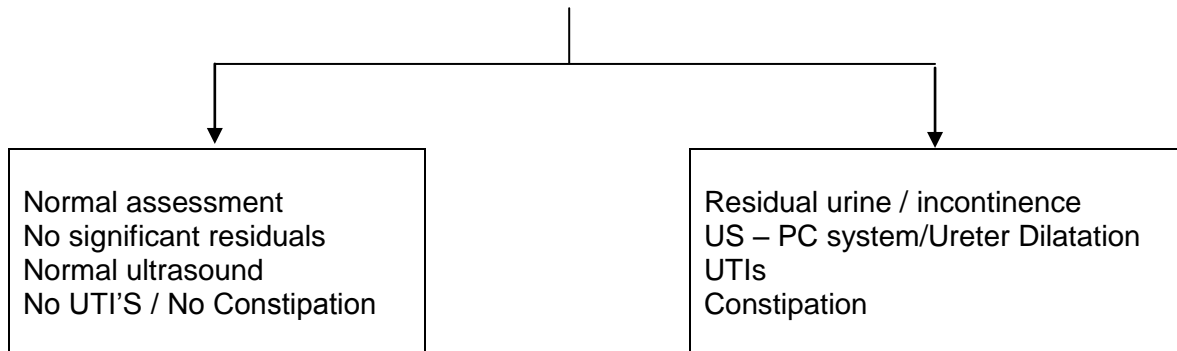
## NEURO-UROLOGY PROTOCOL FOR CLOSED SPINAL LESIONS

Referral from Neurosurgery



- **Bladder Function Assessment**
- **Ultrasound Scan Renal Tract**

- **Book DMSA Scan – baseline**



## ORTHOPAEDICS

Assessment for presence of talipes and dislocated hips refer to orthopaedics for review.

## DISCHARGE

- If the infant is to be nursed prone for 6 months on discharge (i.e. flap closure of spinal lesion) refer to Home Monitoring Clinic for apnoea home monitoring.
- If able to nursed side lying or supine ensure safe infant sleeping/SIDS guidelines are taught.
- Follow up appointment 1 month after discharge with SRT (will include neurosurgical review, orthopaedics, hip ultrasound. urology etc). If problems with neonatal care, i.e. infection, weight gain will require Neonatal outpatient's appointment.

## REFERENCES/BIBLIOGRAPHY

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