



RCNIC MANUAL

NUMBER: **V-1.02**

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DATE OF ORIGINAL: **5/04**

DATE OF REVIEW: **9/07**

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SUBJECT: Infant with Myelomeningocele in the RCNIC

APPROVAL

Preoperatively:

Refer to V-302, Perioperative Patient

Outcome Criteria:

- I. Patient will be free of injury related to spinal cord defect.

Process Criteria:

- A. Upon admission, place the infant prone with a foam donut under the abdomen.
- B. Normal Saline is primed through IV tubing and hung from the overhead warmer, to slowly drip on to a Telfa pad that is gently placed atop the lesion. (The goal is to keep the Telfa pad saturated and hence the lesion also. This protocol applies to all MM lesions, whether open or closed.)
- C. If the lesion is closed, the infant may require several days of evaluation and this type of treatment is ongoing until surgery for repair.
- D. If the lesion is open and leaking CSF, then the lesion will be repaired within 24 - 36 hours.
- E. Avoid use of diapers over lesions – use chux or pee ons.
- F. Do not weigh or hold infant.
- G. Avoid the use of Latex products.
- H. Please check MD orders for specifics.
- I. If you have any questions, contact the neuro team.

Outcome Criteria:

- II. Patient will demonstrate neurological stability.

Process Criteria:

- A. Assess patient's neurological status. Refer to Assessment Standards (VI - 101). Pay close attention to fontanelles and spontaneous movement of extremities
- B. Assess lesion, noting size, color, closed or open lesion, presence or absence of CSF fluid.
- C. Obtain and document head circumference.
- D. Note and document spontaneous voiding.

Outcome Criteria:

- III. Patient will maintain adequate hydration/nutrition.

Process Criteria:

- A. Strict I & O.
- B. Administer IV fluids as ordered. *Note - no scalp IV's are to be performed.



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- C. Assess for signs of adequate hydration: skin turgor, capillary refill and heart rate.
- D. NPO if ordered.
- E. Obtain labs as ordered.
- F. Obtain type and cross as ordered.

Outcome Criteria:

- IV. Parents will knowingly participate in the preoperative experience.

Process Criteria:

- A. Assess parent/family experience and perception of the operative procedure.
- B. Insure that signed consents have been obtained from parents for the surgical procedure and for possible blood transfusion.
- C. Initiate teaching, utilizing patient education record:
 - 1. Provide explanation of NIPS pain scale and pain management.
 - 2. Discuss postoperative expectations
 - Equipment
 - Ventilator
- D. Explore family support system and cultural beliefs.
- E. Contact social worker and chaplain for support as needed.

Postoperatively:

Outcome Criteria:

- V. Patient will be free from injury related to repair of spinal cord defect.

Process Criteria:

- A. Position prone with decreased HOB, until ordered otherwise. After 24 - 48 hours, order may be written for side-lying positioning
- B. No holding or weighing of infant until ordered.
- C. Maintain intact and clean dressing. Position mud-flap between distal edge of dressing and the anus to prevent contamination of site with stool. If the dressing becomes soiled with stool, cleanse the site with ½ strength peroxide and normal saline. Call the neurosurgery MD/NP for further orders.
- D. Avoid use of diapers over incision - use chux, or pee-ons.
- E. Assess for bleeding, drainage, edema or redness at surgical site.
- F. Assess for signs of infection - vital sign changes
- G. Assess perineal area for signs of breakdown.
- H. Assess for discomfort/pain using NIPS scale. See Soc for Pain management (V - 301).



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Outcome Criteria:

VI. Patient will demonstrate neurological stability.

Process Criteria:

- A. Refer to SOC V-308, Increased Intracranial Pressure, Patient with
- B. Assess neurological status. Refer to Assessment Standards (VI-101). *Pay close attention to fontanelles and spontaneous movement of extremities.
- C. Perform neuron checks as ordered.
- D. Daily head circumferences.

Outcome Criteria:

VII. Patient will maintain adequate hydration/nutrition.

Process Criteria:

- A. Strict I & O.
- B. Administer IV fluids as ordered. *Note - no scalp IV's are to be used.
- C. Offer enteral feeds as ordered.
- D. Obtain labs as ordered.

Outcome Criteria:

VIII. Patient will maintain adequate elimination.

Process Criteria:

- A. Assess for spontaneous voiding.
- B. Straight cath. for post residual urine every four hours or as ordered.

Outcome Criteria:

IX. The parent/family will express behaviors that indicate ability to meet infant's postoperative needs.

Process Criteria:

- A. Provide Health Topics as appropriate.
- B. Provide education regarding the following and document on the patient education record:
 - 1. Signs and symptoms of urinary retention.
 - 2. Signs and symptoms of urinary tract infection.



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3. Straight catheterization for urine (although infant may be voiding spontaneously, eventually there will be a need for straight catheterization).
4. Wound care.
5. Signs and symptoms of increased intracranial pressure.
6. Shunt information
7. Latex precautions
8. Well baby care
9. CPR
10. Car seat safety/ restrictions.
11. Sensation loss

C. Provide parents/family with appropriate discharge follow-up appointments.

1. MM clinic
2. Urology Clinic
3. Private Pediatrician

D. Provide parents/family with information about support groups i.e. Spina Bifida Association.

References:

CCHMC Pediatric Neurosurgery Clinical Guidelines :
Dr. Karin Bierbrauer's Guidelines (2005)

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Laminectomy (2007)

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