1.0 Introduction

Gastroschisis is a congenital abdominal wall defect that allows herniation of abdominal content, most often including the intestines and stomach, outside of the body without a protective sac or layer. Worldwide, the incidence of gastroschisis has risen to approximately 2 to 5 infants per 10,000 live births. In most cases of simple, uncomplicated gastroschisis the outcomes are favorable, with high survival and low morbidity rates.

Standardized management in the postnatal period is key for several reasons, including: improving management of fluids and electrolytes, ensuring safe reduction of the defect, achieving earlier return of bowel function, and reducing infection risks. Each of these factors influence the length of hospital stay in the Neonatal Intensive Care Unit (NICU).

This document was developed by an interdisciplinary group of clinicians from SickKids to help guide the management of infants with gastroschisis in the NICU. The goal is to allow patients and families to experience a smoother hospitalization, achieve the best outcomes, and support a timely transition from the NICU to a unit that optimizes developmental care and parent-child bonding.

The clinical pathway was created, revised and finalized using research knowledge, clinical experience, and consensus agreement of a group of neonatal and surgical clinicians. The pathway is a general guideline and does not represent a professional care standard governing providers' obligations to parents. Care must always be revised to meet individual patient needs.

Target Population

- This care pathway is indicted for neonates admitted to the Hospital for Sick Children Neonatal Intensive Care Unit (NICU) with a diagnosis of uncomplicated gastroschisis and a gestational age of 35 weeks or greater.
- This pathway should not be used to guide management for neonates born less than a gestational age of 35 weeks or neonates identified to have anatomical findings that may influence care trajectory (e.g., intestinal atresia, significant intestinal inflammation or matting).

Target Users

- Physicians, surgeons, registered nurses, nurse practitioners, dieticians, social workers, respiratory therapists, and parent liaisons involved in the care of identified neonates.
2.0 Recommendations

**Goals**
- Appropriate airway management
- Protect exposed bowel
- Appropriate fluid management
- Application of silo
- Establish baseline vital signs and labs

**Gastroschisis (uncomplicated neonates with gestational age ≥ 35 weeks at birth)**

**Day of Admission (0-24 hours post birth)**
- Mount Stoll initiation bridge call
- Mount Stoll team follows post-natal management protocol
- Neonate transferred to SickKids as soon as possible after birth
- NICU medical team uses Epic order set: After Abdominal Wall defect
- Total fluid intake (TFI) per order set: 100-120 ml/kg/day
- Maintains NPO
- Neonatologist (NGT) to low intermittent suction
- Complete admission labs as per order set
- Analysis assessment completed by NICU team
- Obtain accurate weight before silo placed
- SickKids General Surgery team to complete surgical assessment and determine plan
- Application of silo by General Surgery team and documentation in chart indicating photographs in media of silo bar code used
- Monitor bowel color and peristalsis in silo – hourly (eg., color change, distal bowel growth)

**Organic management**
- Monitor lower limb perfusion (eg., capillary refill, color, and warmth) and notify medical team of concerns
- If primary closure possible on admission, follow orders as suggested by surgical team

**Consultation/Graduation**
- Social Worker referral if indicated
- IGT PICC insertion request completed
- Complete lateral views abdominal radiograph (K-vue) when silo placement is complete

**Family/Parent Education**
- Introduce team and overview plan of care
- Discuss silo placement, detect closure plan and prepped timing, and need for PICC and parenteral nutrition (PN)
- Encourage pumping and storage of breast milk

**Targets of Length of Stay in NICU: 14 days**

**Day 2 - 5 post birth**
- Ensure appropriate respiratory support (IF required)
- Reduction of bowel into abdomen via silo
- Maintain fluid balance and nutritional support
- Secure central IV access
- Engage parents in neonate’s care

**Day 5 - 7 post birth**
- Appropriate respiratory support
- Closure of abdominal wall
- Elimination of 48 hours of procedure of abdominal wall closure
- Maintain fluid balance and nutritional support
- Monitor bowel function

**Day 8 - 14 post birth**
- Await return of bowel function
- Initiate feeds when ready
- Score oral feeding readiness
- Engage parents in care provision
- Transition to IBF

**Facilitators to implementation**
- Targeted length of stay posted at bedside as a reminder of pathway utilization
- Surgical Nurses Interest Group will be available resources to implement pathway
- Neonatal NP Group will advocate for pathway utilization and remind team to review daily

**Organizational barriers to implementation**
- Adoption by staff in initial stages

**Potential economic impact**
- Decreased length of stay and non-value add days in NICU

**3.0 Related Documents**

*Neonatal Post Operative Pain Guidelines*
4.0 References


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Attachments: Gastrochisis care pathway