Omphalocele Clinical Pathway: NICU Management

July 2026

Children's Healthcare of Atlanta

Consult requested for prenatally identified Omphalocele

Prenatal Consults

** Use .NEOFETALOMPHALOCELE for fetal consults*

- Discuss all procedural options, including **paint-and-wait (PAW)** and **DuoDerm silo reduction (DDSR)**.
  - Review the rationale, inclusions, and relative exclusions for each.
- Encourage prenatal MRI.

On admission to NICU:

** Antibiotics according to clinical concerns but not empiric. Avoid LE CVADs.*

- Consult General Surgery.
- Place Replogle and set to low intermittent suction.

On any respiratory support?

- YES → Obtain Echo on admission.
- NO → Obtain Echo in the AM.

No contraindications and family and care team agree to DDSR?[1]

- NO → **Discuss moving to PAW or other plan-of-care.**
- YES

Bedside DDSR and Care

**Prior to beginning reductions ensure nursing is at bedside; especially when patient is intubated.*

- Complete **DDSR assessments** [2] 4 hours after each reduction, or sooner for clinical concerns.
- Draw daily LFTs during active reductions.
- Follow **DDSR feeding guidelines** [3].

Concerns of increased intraabdominal pressure?

- YES → Discuss care with neonatology team and surgery attending regarding need to release or remove DuoDerm Silo
- NO

Need to remove DuoDerm Silo?

- NO → Hold formal weekly multidisciplinary review of closure progress and anticipated time to closure.
  - Average closure time is referenced to be 1.5 months
- YES → Consider conversion to PAW.

Significant escalation of respiratory support or clinical event [4], or insufficient closure progress?

- YES → Consider conversion to PAW.
- NO → Continue DDSR unless otherwise indicated.

Refer to Developmental Progress Clinic at discharge.

[1] Exclusion Criteria

- <35 weeks; may consider <35 weeks if closure is likely given size of defect compared to infant
- Ruptured omphalocele (consider case-by-case)
- Pulmonary hypoplasia
  - Mean airway pressure >18
  - FiO2 >40%
  - HFOV
- Complex heart disease
- Pulmonary hypertension
  - Requirement of iNO
  - Evidence of RV dysfunction
  - Use of milrinone
  - FiO2 > 40%
- Confirmed genetic or major anomaly

[2] DDSR Assessments

- Intraabdominal pressure check by Surgery Provider 2-4 hours after reduction
  - ** PGN to document DDSR procedure and abdominal pressure check using .NICUDDSRASSESSMENT*
- Urine output
- Signs of respiratory compromise
- Lower extremity perfusion

[3] DDSR Feeding Guidelines

- Minimum of trophic feeds with mother's own milk, or donor breastmilk while undergoing DDSR.
- If unable to reduce within 5-7 days, begin advancing enteral feeds, continuous via NG by 20ml/kg/day as tolerates.
- Bowel regimen: daily/q12 glycerin suppositories
- May advance once a day 12 hrs from reduction if without signs of increased intraabdominal pressure with post reduction checks.
- Allow oral intake of small PO volumes, if on low enough respiratory support, in concordance with what enteral feeds patient is on.

[4] Significant Escalation of Respiratory Support or Clinical Event

Significant increase in respiratory support defined as an increase in 2 steps of respiratory support. Examples include:

- Room air → Non-invasive positive pressure ventilation
- Nasal cannula → Intubation
- Continuous mandatory ventilation → High-frequency oscillatory ventilation

Examples of significant clinical events include:

- Significant infection
- Clinical sepsis
- Pulmonary hypertensive crisis

References

Abello, C., A Harding, C., P Rios, A., & Guelfand, M. (2021). Management of giant omphalocele with a simple and efficient nonsurgical silo. Journal of pediatric surgery, 56(5), 1068–1075. https://doi.org/10.1016/j.jpedsurg.2020.12.003

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