

Fetoscopic Myelomeningocele Repair Complications

- [Benefits and complications of fetal and postnatal surgery for open spina bifida: systematic review and proportional meta-analysis](#)
- [Safety and Effectiveness of Fetal Myelomeningocele Repair: Case Series Analysis Using an Exteriorized Uterus and a Fetoscopic Approach](#)
- [Outcomes Following Fetoscopic Repair of Myelomeningocele: A Prospective Single-Center Experience](#)
- [Fetoscopic Myelomeningocele \(MMC\) Repair: Evolution of the Technique and a Call for Standardization](#)
- [Proof of concept testing of a vascular closure device for use in fetal surgery](#)
- [Cryopreserved decellularized human umbilical cord matrix allograft as duraplasty for fetoscopic prenatal spina bifida repair](#)
- [Optimizing Myelomeningocele Repair: Assessing the Role of Synthetic Acellular Dermal Regeneration Templates in Complex Closures](#)
- [Should We Stitch-Close the Fetoscopic Percutaneous Access? A Case-Series of Laparotomy to Trans-Amniotic Membrane Suturing for Intrauterine Port Placement in Fetoscopic Surgery for Twins](#)

Fetoscopic myelomeningocele repair is a [minimally invasive alternative](#) to [open fetal surgery](#) for [spina bifida repair](#). While it offers advantages such as reduced maternal morbidity and the possibility of vaginal delivery, it is associated with a unique set of complications. These complications can be categorized into maternal, fetal, and neonatal risks.

Maternal Complications

see [Maternal Fetoscopic Myelomeningocele Repair Complications](#)

Fetal Complications: 1. Preterm Birth:

1. The most significant fetal risk.
2. Directly related to surgical intervention and membrane complications.

2. Fetal Demise:

1. Rare but can occur due to surgical complications or severe preterm birth.

3. Membrane Seal Failure:

1. Can lead to persistent leakage of amniotic fluid and oligohydramnios.

4. Cord Complications:

1. Umbilical cord entanglement or compression may occur.
2. Risk increases with prolonged chorioamniotic separation.

5. Intrauterine Growth Restriction (IUGR):

1. May result from placental dysfunction secondary to surgical intervention.

Neonatal Complications: 1. Pulmonary Hypoplasia:

1. Can result from prolonged oligohydramnios.
2. May require respiratory support at birth.

2. Wound Dehiscence and CSF Leak:

1. Postnatal wound breakdown can occur, necessitating revision surgery.

3. Hydrocephalus and Shunt Dependence:

1. Fetoscopic repair reduces the need for postnatal shunting compared to postnatal repair but may still be required in some cases.

4. Lower Extremity Dysfunction:

1. Motor function improvement may be limited, particularly in severe cases.

5. Neonatal Sepsis:

1. Premature birth and membrane rupture increase the risk of neonatal infections.

Long-Term Considerations: - Neurodevelopmental Outcomes:

1. Generally improved compared to postnatal repair.
2. Some infants may still experience cognitive and motor impairments.

- Urological and Bowel Dysfunction:

1. Persistent issues despite early intervention.
2. Requires lifelong management.

Conclusion: Fetoscopic MMC repair is an evolving technique with clear advantages but also significant complications. The balance between improved fetal neurological outcomes and risks of preterm delivery remains a primary consideration when selecting candidates for surgery. Further research and technical refinements aim to reduce complications and improve both maternal and fetal outcomes.

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