

# Birth of a Breakthrough

Fetal repair of myelomeningocele at The Children's Hospital of Philadelphia.

## Referral Guidelines

**Fetal Surgery for MMC may be offered at The Children's Hospital of Philadelphia in the following circumstances:**

1. Myelomeningocele at level T1 through S1 with hindbrain herniation. The lesion can extend below S1, but the highest level cannot be outside the T1-S1 range. Lesion level and hindbrain herniation will be confirmed by ultrasound and MRI.
2. Gestational age at the time of fetal surgery must be no greater than 25 weeks, 6 days.
3. Maternal age  $\geq 18$  years
4. Singleton pregnancy
5. Normal karyotype with written confirmation of results

**Fetal Surgery for MMC will NOT be offered if the mother has any of the following conditions:**

1. Insulin dependent pregestational diabetes
2. Fetal anomaly not related to myelomeningocele – such as a cardiac defect or intracranial hemorrhage
3. Fetal kyphosis of 30 degrees or more at the level of the spina bifida lesion determined by MRI and ultrasound at CHOP
4. Cerclage or documented history of incompetent cervix
5. Placenta previa
6. Placental abruption — a suggestion of a recent abruption or chronic placental edge bleeding (marginal abruption).
7. A history of vaginal bleeding will be evaluated before fetal surgery will be offered.
8. Short cervix ( $< 20$  mm) based on the measurement taken at the time of your evaluation
9. BMI greater than 35
10. Previous spontaneous delivery prior to 37 weeks – if membranes were intact and labor was induced, this is not considered spontaneous. A history of a stillbirth will require further review.
11. Maternal-fetal Rh isoimmunization, Kell sensitization or a history of neonatal alloimmune thrombocytopenia
12. Maternal HIV or Hepatitis-B status positive
13. Maternal Hepatitis-C status known positive
14. Uterine anomaly such as multiple fibroids, mullerian duct abnormality, bicornuate or unicornuate uterus, uterine septum, and double uterus. Any patient with a previous hysterotomy in the active segment of the uterus (whether from a previous classical cesarean, uterine anomaly such as an arcuate or bicornuate uterus, myomectomy, or previous fetal surgery).
15. Maternal hypertension which would increase the risk of preeclampsia or preterm delivery (including, but not limited to: uncontrolled hypertension, chronic hypertension with end organ damage and new onset hypertension in current pregnancy)
16. Other maternal medical condition which is a contraindication to surgery or general anesthesia, such as some cases of asthma, cardiac disease or the refusal of a blood transfusion. Examples of medical conditions that are NOT exclusionary: epilepsy, abnormal pap results and thyroid nodules.
17. No support person
18. Inability to comply with the travel and follow-up requirements
19. Patient does not meet other psychosocial criteria as evaluated by our social worker

Comprehensive individual evaluation of each pregnancy is essential to determine whether prenatal repair is appropriate. If you would like to refer a patient to the Center for Fetal Diagnosis and Treatment for evaluation or discuss a case with a member of our team, please contact us at **1-800-IN-UTERO (468-8376)**.