

# Birth of a Breakthrough

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

## Fast Facts

- Prenatal repair of myelomeningocele is now offered as a standard of care at The Children's Hospital of Philadelphia (CHOP).
- A landmark national randomized prospective trial – the Management of Myelomeningocele Study (MOMS) — directly compared prenatal to traditional postnatal repair of MMC. The study was conducted under the auspices of the Eunice Kennedy Shriver National Institute of Child Health and Human Development.
- The study, which enrolled 183 participants, reported significantly improved outcomes after prenatal repair versus postnatal repair. Specifically, the study found that prenatal repair resulted in:
  - Reduced need for ventricular shunting, as measured at 12 months of age
  - Reduced incidence or severity of neurologic effects, such as impaired motor and sensory function of the legs
  - Improved ambulation, as measured at 30 months of age
  - Reversal of the hindbrain herniation component of the Chiari II malformation

Study results are published in the *New England Journal of Medicine*: N. Scott Adzick, M.D. et al., "A Randomized Trial of Prenatal versus Postnatal Repair of Myelomeningocele," *New England Journal of Medicine*, Online First, Feb. 9, 2011 (to appear March 24, 2011 in print edition).

- Led by N. Scott Adzick, M.D., the Center for Fetal Diagnosis & Treatment team pioneered the fetal repair technique, first in animal models and later in selected clinical cases.
- The Center for Fetal Diagnosis & Treatment is one of the most experienced programs in the world, in both fetal repair and in providing an exceptional breadth and depth of care for pregnancies complicated by birth defects.
- The Center's multidisciplinary team includes fetal surgeons, neurosurgeons, maternal-fetal medicine specialists, fetal cardiologists, neonatologists, anesthesiologists, sonographers, advanced practice nurses, social workers and coordinators — all focused on the best outcome for mother and baby. The Center also draws upon the full resources of The Children's Hospital of Philadelphia.
- The Center for Fetal Diagnosis & Treatment is home to the world's first delivery unit within a pediatric hospital created specifically for pregnancies. The Special Delivery Unit not only allows the most advanced care for neonates immediately upon delivery, it allows mother and baby to remain together in the same hospital for the duration of their care.

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