The making of fetal surgery: revisited

Establishment of an interdisciplinary center for open fetal surgery for spina bifida


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Abstract

Respecting the criteria set out by the MOMS Trial1, the Maternal-Fetal Management Task Force in the Position Statement on Fetal MMC repair2, the ACGO Committee Opinion3 and the DGGG Committee Opinion4 the establishment of the first interdisciplinary fetal surgical center for the open treatment of the Spina bifida in Germany, at the Heidelberg University Hospital was possible. However, highly selected cases5, a multidisciplinary coordination of care, continuous review of the procedure (uterine exposure, closure, PNCN technique), reevaluation of goals and preparedness for the unimaginable are paramount.

Methods

...should only be offered at facilities with expertise, in multidisciplinary teams ... 

Infrastructure

- One of the largest medical centers in Germany
- 15 hospitals, over 50 clinical departments
- 1830 beds, over 1 million patients each year
- Most active biomedical research center in Germany

Multidisciplinary approach

- Fetal Care Team (4 Physicians)
- Pediatric Neurosurgery (2 Physicians)
- Neonatal Intensive Care (3 Physicians)
- Anesthesiology (3 Physicians)
- Maternal Fetal Advocate (1 Midwife)
- Genetic Counseling (1 Physician)

Expertise and Services

- Individual members have extensive expertise
- Experienced in MFM, Hysterotomy, EXIT, Critical Care Obstetrics, Early Preterms
- Extensive expertise in Postnatal Closure of MMC
- Experience in working as a group (EXIT procedures, High Risk Pregnancies) with adequate annual volume of procedures

...in close cooperation with competent, well established international programs ...

Guidance and Training

- Cooperation with the St. Louis Fetal Care Institute - Teaching, Mentoring, Evaluation, Perioperative care, On Spot experience in St. Louis as a Team, exported training

... is essential to establish minimum criteria for centers offering open MMC ...

Evaluation, Pre-/ OP / Postop management

- Strict adherence to the MOMS Protocol
- Operation in adherence to the St. Louis Protocol
- STL Colleagues present in the OR for the first cases
- 24h MFM/OB/Neo and Anae availability

Counseling: full disclosure and non directive

- Multidisciplinary, multiple days, non directive
- Discussion about
  - other available therapies and centers (postnatal, fetoscopic, abortion)
  - limitations and possible complications and long term outcomes
  - Institutional experience and cooperation
  - fertility and subsequent deliveries
- Prior decision, a 24 reflexive period is respected

Long Term Care

- Multidisciplinary Spina Bifida Center with longstanding expertise and available Heidelberg and referral centers
- Long Term Evaluation Protocol in place

Discussion

As a major collaborative effort, under the umbrella of the University Hospital Heidelberg, the first interdisciplinary German center for the prenatal treatment of the spina bifida has been established. Using one of the two primary models of training, the exported training, in which following an initial interdisciplinary visit of the German team to St. Louis, an experienced group from the Saint Louis Fetal Care Institute traveled to our center to train our staff in our own environment establishing the capacity for the open fetal surgery for the MMC.

Coordinated by the Department for Maternal Fetal Medicine, in adherence to international recommendations, a fetal board was established. Candidate cases are discussed by a multidisciplinary panel and evaluated against existing standards, offering a maximum security and the highest standard by combining the knowledge and expertise of a team.

References

3. ACGG Committee opinion, on: Open fetal surgery for myelomeningocele, Obstetrics and Gynecology 121/1 2013
5. The making of fetal surgery, Coopert J et al., Perinat Diag 2010

ACOG – American College of Obstetricians and Gynecologists
DGGG – German Society of Obstetrics and Gynecology
MOMS – Management of Myelomeningocele
MFM – Maternal Fetal Medicine
PNCN – Pediatric Neurosurgery
AMAC – Anaeesthesiology
NEC – Neurology
MMC – Myelomeningocele