

EP.0268 - Planned delivery for a fetus diagnosed with a meningocele: A case report



Silva PGYS¹, Hemapriya WS¹, Fonseka NA¹, Jayasinghe JAJN², Rambukwella PCB¹, Thilakarathna KMHC¹, Wickramasinghe R³

¹Ward 5, Gynaecology and obstetrics unit, National hospital, Kandy, Sri Lanka.

²Ward 01, Gynaecology and Obstetrics unit, Base Hospital, Mahiyangana, Sri Lanka.

³Ward 51, Neurosurgical unit, National Hospital, Kandy, Sri Lanka.

Objectives:

Neural tube defects (NTD) are classified as spina bifida (SB) occulta (closed defects) and SB aperta (open defects) comprising of myelomeningocele, meningocele and myeloschisis. Former condition shows better outcome with least complications and latter conditions may lead to ambulatory difficulties, impaired bladder, bowel functions and cranial anomalies. Complications are minimized by planned, atraumatic delivery with available post-delivery corrective facilities. Here we discuss a case of a fetus with meningocele, managed successfully.

Case report:

A 33-year-old lady, in her second pregnancy at period of gestation (POG) of 36 weeks was transferred for multi-disciplinary team (MDT) care as she was carrying a fetus with a L4 to S3 level meningocele. It was diagnosed by ultrasonography at 21weeks. She was healthy, with negative family history for NTDs. Neonatology and neurosurgical teams were alerted and planned for inward care until term as she was having polyhydramnios. As the meningocele was large (6cm), to prevent its rupture, an elective caesarean section (CS) was planned with a midline skin incision and a possible “J” extension of the uterine incision.

At 36weeks POG, she developed dribbling and an emergency CS was performed to prevent an ascending infection and neonatal sepsis. Pre-planned steps followed sequentially ended up with sending a 14 days old baby home with intact sphincter functions and limb movements at post correction day 13.

Discussion:

Open NTDs carry higher risk of neurological dysfunction compared to closed defects. Maternal serum and amniotic fluid alpha-feto protein (AFP) levels and ultrasonography provide adequate clues for differentiation.

A meningocele has protrusion of meninges, forming a thin-walled cystic lesion containing CSF. Usually, the spinal cord and roots stay intact, preserving neurological functions. Rupture of a large meningocele may result in sudden intracranial pressure depletion and infection. Thus, all precautions for a meticulous delivery must be implemented in absence of facilities for prenatal correction. Despite no clear advantage of offering CS over a vaginal delivery in presence of NTDs, individual considerations are made to minimize trauma to neural tissue, to prevent rupture of meningoceles, prevent intrapartum hypoxia and labor dystocia.

Conclusions:

Prognosis of NTDs depend on type of defect, affected segment/s, presence or absence of other anomalies and level of care provided. Consistently better outcomes were noted once delivery is planned at a tertiary center with advanced pediatric neurosurgical facilities. Unless any other obstetric indication/s warranted, delivering at term to prevent prematurity associated complications is vital.

References

1. Ghi T, Pilu G, Falco P, Segata M, Carletti A, Cocchi G, Santini D, Bonasoni P, Tani G, Rizzo N. Prenatal diagnosis of open and closed spina bifida. *Ultrasound Obstet Gynecol.* 2006 Dec;28(7):899-903. doi: 10.1002/uog.3865. PMID: 17086581.
2. Adzick NS, Thom EA, Spong CY, Brock JW 3rd, Burrows PK, Johnson MP, Howell LJ, Farrell JA, Dabrowiak ME, Sutton LN, Gupta N, Tulipan NB, D'Alton ME, Farmer DL; MOMS Investigators. A randomized trial of prenatal versus postnatal repair of myelomeningocele. *N Engl J Med.* 2011 Mar 17;364(11):993-1004. doi: 10.1056/NEJMoa1014379. Epub 2011 Feb 9. PMID: 21306277; PMCID: PMC3770179

