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LIFE BEYOND LIMITS: CHALLENGING PERCEPTION OF MENINGOMYELOCELE

Obstetrics & Gynaecology

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ABSTRACT

In an era where antenatal detection of neural tube defects frequently leads to termination based on a presumed "diminished quality of life," this case offers a compelling counter-narrative. Despite antenatal diagnosis of meningomyelocele, the pregnancy was continued. The child survived into adulthood, led a meaningful life, and later conceived spontaneously, delivering a healthy neonate—demonstrating preserved reproductive potential and functional capacity. Neural tube defects are often associated with significant neurological disability and are traditionally considered high-risk, prompting elective termination due to anticipated complications. However, outcomes are variable and not uniformly poor. We report the journey of a 25-year-old woman with congenital meningomyelocele and paraparesis who successfully completed a spontaneous pregnancy with a favourable outcome. This case underscores the importance of individualized antenatal counselling, informed decision-making, and multidisciplinary care, while challenging the perception that meningomyelocele precludes a fulfilling life or successful motherhood.

KEYWORDS

Meningomyelocele, Spinal Dysraphism, High-risk Pregnancy, Successful Pregnancy Outcome, Caesarean Section, Congenital Anomalies.

INTRODUCTION

Meningomyelocele is a severe form of congenital neural tube defect, often diagnosed in early life and associated with long-term neurological sequelae including paraparesis, bladder and bowel dysfunction, and orthopaedic support. Pregnancy in such patients is highly uncommon and frequently considered high risk due to concerns regarding maternal mobility, respiratory compromise, autonomic dysfunction, and foetal outcomes. Literature documenting successful maternal and neonatal outcomes remains limited.

Statistics:

Neural tube defects (NTDs) remain a significant public health concern in India, with a reported prevalence ranging from **4.1–4.5 per 1000 births** to as high as **~9.46 per 1000 births** in recent meta-analyses[1–3]. Despite advances in antenatal diagnosis, **38–40% of affected pregnancies are electively terminated**[4], reflecting concerns regarding severe disability and perceived poor quality of life. In some cohorts, only **~19% of fetuses are live-born**, with approximately **11% surviving beyond two years**[4].

However, outcomes are not uniformly poor. Indian observational studies indicate that a proportion of pregnancies are continued due to sociocultural and personal factors, with **meaningful survival beyond infancy**[2, 5]. Among women who declined termination, **neonatal survival rates approach 90%**, with most deliveries occurring at term and **over 90% undergoing postnatal surgical repair**[6].

Although morbidity remains significant—**paraplegia (~30%)**, **neurogenic bladder (~50%)**, and **postoperative complications (~6%) **[6]—functional survival is achievable. Maternal outcomes are generally favourable, with term delivery common and caesarean rates of **~70–80%**, without a consistent increase in maternal mortality[6]

Case Presentation

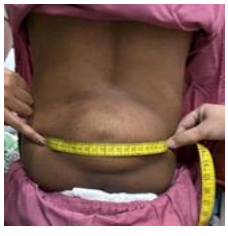
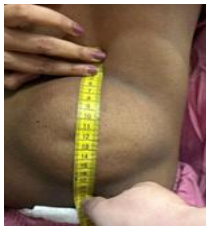
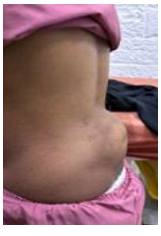
A 25-year-old primigravida, a known case of congenital spinal dysraphism with paraplegia and meningomyelocele since childhood, presented at 39+ weeks of gestation. She had conceived spontaneously and had been receiving regular antenatal care.

She had a history of corrective surgeries done in childhood and achieved a life of mobility with orthopaedic support. However, maintaining a supine position presented a significant challenge as pressure on the meningomyelocele sac during recumbency exacerbates neurological symptoms, manifesting as distressing tingling sensations throughout her lower extremities.

Antenatal period remained largely uneventful, except for restricted mobility and neurogenic bladder issue of urge incontinence exacerbated In third trimester. There was no history of diabetes, hypertension, or chronic infections. Ultrasonography during pregnancy revealed a live singleton foetus with mild oligohydramnios and foetal growth restriction. No foetal structural anomalies were detected. MRI of the spine of the mother (performed earlier in life) had confirmed meningomyelocele with communication to the spinal canal.

Obstetric examination was difficult and challenging as the patient could not be given lithotomy position due to neurological complications caused by sac compression, hence the examination was done in a semi- lateral position and revealed a term uterus with cephalic presentation. Foetal heart rate was reassuring. Considering the underlying neurological condition, it was understood that the challenge was not just obstetric, but also structural. Her pelvic anatomy and the presence of the meningocele required a surgical strategy delivery. After a careful analysis of the case and multidisciplinary approach a decision for elective lower segment caesarean section was taken.



Management and Outcome

To protect the delicate site of her spinal defect, she was positioned with specialized supports and wedge pillows under the spinal sac and an elective lower segment caesarean section was performed under general anaesthesia with multidisciplinary support. A live male neonate weighing 2.3 kg was delivered, cried immediately after birth with a good Apgar score. The baby showed no external congenital anomalies.

The postoperative period was uneventful. The mother remained hemodynamically stable with neurological improvement of urinary incontinence. Both mother and baby were discharged in satisfactory condition. At follow-up, she returned to her baseline ambulatory status, proving that the "burden" of pregnancy did not have a sequalae on her physical independence. The neonate too showed normal growth and development.

DISCUSSION

This case is a strike against the "presumptive termination" culture. In modern medicine, the discovery of a meningomyelocele often triggers a conversation revolving around -loss, limitation, and the recommendation to end the pregnancy. This woman's life—and the life of her child—proves these assumptions wrong.

The success of this case hinged upon a paradigm shift. This achievement underscores three pillars of modern high-risk care:

1.**Individualized advocacy** that sees the person beyond the pathology

2. **Multidisciplinary synergy between specialized fields-** Merging neurology, anaesthesia, and obstetrics with vigilant antenatal foetal surveillance

3. **Humanity over Statistics:** The joy of motherhood is a universal right; neurological disability is not an exclusionary criteria for the fulfilment of maternal life irrespective of one's physical architecture.

CONCLUSION

This case serves as a critical clinical validation that **congenital spinal dysraphism is not an absolute contraindication to a successful obstetric outcome.** The transition from a pathology-centred model to a **patient-centred paradigm** is essential in dismantling the systemic barriers that women with neurological disabilities face in their pursuit of motherhood.

A diagnosis of meningomyelocele should be met with a multidisciplinary support system rather than a presumptive recommendation for termination. By prioritizing meticulous antenatal monitoring and by Modifying standard obstetric protocols, such as specialized surgical positioning (e.g., using wedge supports to preserve the integrity of the spinal defect during anaesthesia), to accommodate the patient's unique anatomy we can have a better feto-maternal outcome. The case highlights the necessity of replacing blanket prognostic protocols with an individualized, risk-stratified management approach and that the medical system should adapt to the patient rather than forcing the patient to fit the system.

This case challenges the deterministic view often associated with neural tube defects and highlights that outcomes can be variable and, in selected cases-favourable. It underscores the importance of balanced antenatal counselling, respect for parental autonomy, and individualized decision-making. Ultimately, this report reinforces that a diagnosis of meningomyelocele does not preclude the possibility of a fulfilling life or successful motherhood.

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