AIIMS Delhi does India's first open fetal surgery for spina bifida

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News

The All India Institute of Medical Sciences (AIIMS), New Delhi, has repaired a lumbosacral myelomeningocele – the most severe form of spina bifida – by open surgery on a 25-week fetus in the womb; AIIMS says it is India's first open fetal repair of this defect. The surgery was done on 12 November 2026 (PTI, 14 Nov 2026). Cerebrospinal fluid (CSF) was leaking through the defect; the mother's abdomen and uterus were opened and the roughly six-hour repair was done under a microscope with continuous ultrasound guidance. It was carried out at the AIIMS Neurosciences Centre after more than five weeks of planning, fetal imaging, counselling and anaesthetic rehearsal. More than 30 doctors and nurses took part, led by neurosurgery professor Deepak Gupta (President, Indian Society for Pediatric Neurosurgery) and maternal-fetal medicine professors Neena Malhotra and K. Aparna Sharma, with anaesthesia, plastic-surgery, neonatology and radiology teams. The treatment was provided free to the family under the Janani Shishu Suraksha Karyakram (JSSK). Doctors said the repair is not a cure: long-term care after birth is still needed, and mother and fetus will be closely monitored. Note: the 'first' claim is AIIMS's own; other (after-birth) surgeries for spina bifida have been done in India before.

Key facts for the exam

Point	Details
Institution	AIIMS New Delhi – Neurosciences Centre
Defect	Lumbosacral myelomeningocele – the severest form of spina bifida

Point	Details
Type	Open fetal surgery (uterus opened; repair before birth)
Gestation	25 weeks (second trimester)
Duration	About 6 hours; 5+ weeks of planning
Leads	Prof Deepak Gupta (neurosurgery); Profs Neena Malhotra and K. Aparna Sharma (maternal-fetal medicine)
Team	30+ doctors and nurses from many specialties
Cost	Free under JSSK
Reported	14 November 2026 (PTI)

Background

- Science: in roughly the first 4 weeks of pregnancy the 'neural tube' closes to form the brain and spinal cord. If it fails to close fully, 'neural tube defects' result – chiefly spina bifida and anencephaly. In myelomeningocele the spinal cord and its membranes bulge out as a sac on the back, which can cause leg paralysis, bladder and bowel problems and fluid build-up in the brain (hydrocephalus).
- Prevention: WHO recommends folic acid (vitamin B9) before conception and in the early weeks of pregnancy, which greatly cuts the risk of these defects. In India, iron–folic acid (IFA) tablets are given to pregnant women under the National Health Mission.
- Fetal-surgery background: the US 'MOMS' trial (2011) tested whether repair before birth works better than repair after birth; prenatal repair reduced the need for a brain shunt and improved walking. Since then it has become a standard option at some centres worldwide, though it carries risks for the mother such as preterm birth and a scarred uterus.
- Scheme: the Janani Shishu Suraksha Karyakram (JSSK) was launched on 1 June 2011. In public hospitals pregnant women get normal and caesarean delivery, drugs, diagnostics, diet, blood and transport free; sick newborns also get free treatment. Janani Suraksha Yojana (JSY) is the cash-incentive scheme for institutional delivery.

Tamil Nadu link: In Tamil Nadu, the 'Dr Muthulakshmi Reddy Maternity Benefit Scheme' gives ₹18,000 to poor pregnant women, linked to antenatal check-ups, iron–folic acid tablets and vaccinations (begun in the late 1980s); for this, the pregnancy must be registered on the 'PICME' portal to get a 12-digit RCH ID. JSSK is also implemented in Tamil Nadu's government hospitals through the National Health Mission. Tamil Nadu's own AIIMS is coming up at Thoppur, Madurai.

Frequently asked questions

What is this news about?

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What are the key facts to remember for the exam?

Institution: AIIMS New Delhi – Neurosciences Centre; Defect: Lumbosacral myelomeningocele – the severest form of spina bifida; Type: Open fetal surgery (uterus opened; repair before birth); Gestation:

25 weeks (second trimester).

What is the background to this news?

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Practice questions (with answers)

1. Spina bifida results from the incomplete closure of which embryonic structure?

A) Notochord

B) Heart tube

C) Gut tube

D) Neural tube

Answer: D – Explanation: Neural tube – it closes in about the first 4 weeks to form brain and spinal cord; failure causes spina bifida or anencephaly.

2. Which vitamin, taken before conception and in early pregnancy, sharply cuts the risk of spina bifida?

A) Folic acid (B9)

B) Vitamin C

C) Vitamin K

D) Vitamin D

Answer: A – Explanation: Folic acid (B9) – WHO advice; pregnant women get IFA tablets. Vitamin K aids blood clotting; D aids bones.

3. The AIIMS fetal surgery was free under which scheme that gives free delivery and sick-newborn care in public hospitals?

A) JSSK

B) PMMVY

C) Janani Suraksha Yojana

D) PM-JAY

Answer: A – Explanation: Janani Shishu Suraksha Karyakram (1 June 2011) – free drugs, tests, diet, blood and transport. JSY is a cash incentive.

4. Which Tamil Nadu portal registers a pregnancy, issues a 12-digit RCH ID and takes applications for maternity aid?

A) U-WIN

B) e-Sanjeevani

C) ABHA

D) PICME

Answer: D – Explanation: PICME – Pregnancy and Infant Cohort Monitoring and Evaluation; needed for Muthulakshmi Reddy scheme aid. U-WIN records vaccinations.

5. The AIIMS repair was done at 25 weeks of pregnancy. The 25th week falls in which stage of pregnancy?

A) First trimester

B) Second trimester

C) Third trimester

D) Post-term

Answer: B – Explanation: Second trimester – about weeks 13 to 27. First: weeks 1–12; third: week 28 to delivery.

Sources: PTI (14 Nov 2026) via The Patriot – thepatriot.in/health/aiims-delhi-performs-indias-first-open-foetal-surgery-to-repair-severe-spinal-defect-92242; Akashvani News (newsonair.gov.in, 14 Nov 2026); WHO (folic acid); National Health Mission – nhm.gov.in (JSSK); DT Next – dtnext.in (Mother's Day: TN maternal welfare schemes; 'TN health dept promotes self-registration of pregnancy via PICME website'); NEJM (MOMS trial, 2011). © Shanmugam IAS Academy.