

EP 10.13 Comparison between late open fetal surgery and neonatal surgical repair in the rate of hydrocephalus at 12 months of age



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FETAL MÉXICO

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Objective:

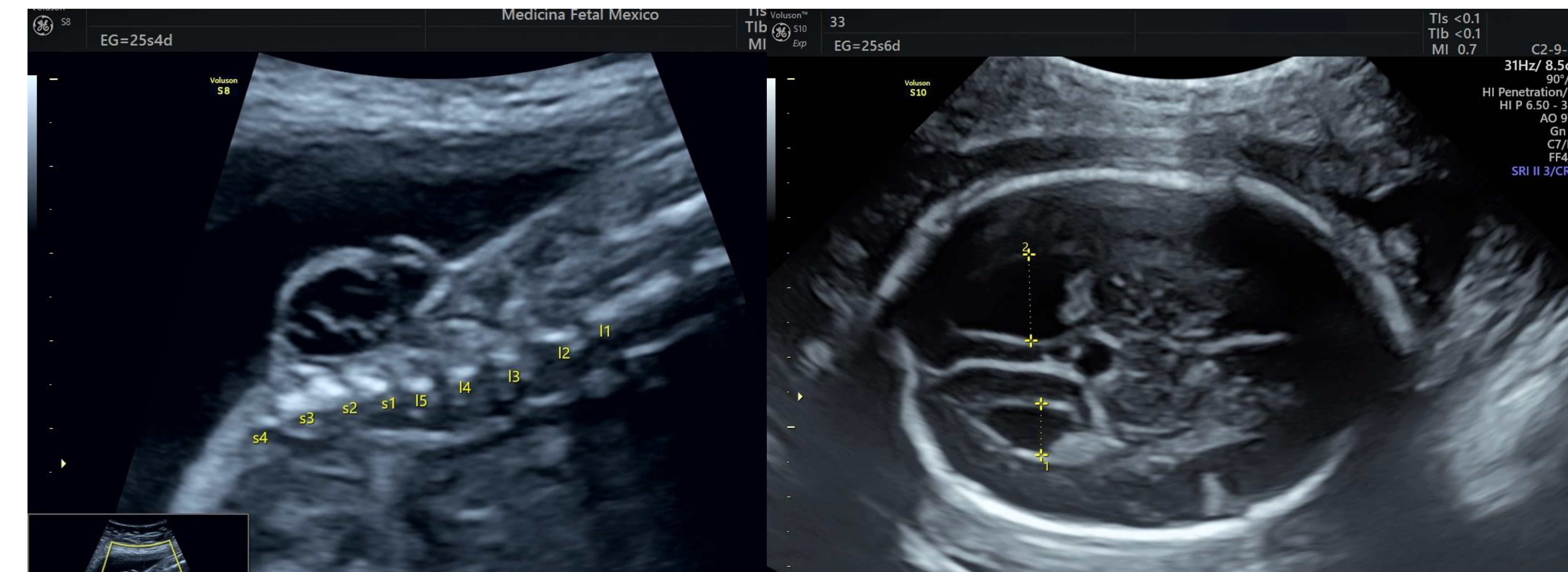
To compare the rate of hydrocephalus needing surgical treatment at 12 months or age in children with open spina bifida treated with late open fetal surgery above 26 weeks and those undergoing postnatal repair

Method:

A retrospective cohort of fetuses with open spina bifida treated with open fetal surgery between 26 and 29 weeks' gestation were matched with a control group receiving neonatal surgical repair. The rate of hydrocephalus and need for ventriculo-peritoneal shunting (VPS) and/or neonatal neuroendoscopy for third ventriculostomy at 12 months or age were compared.

Results:

64 cases were treated with late open fetal surgery at a median gestational age of 27.1 weeks and compared with 64 cases managed with postnatal surgical repair. Fetal surgery was associated with significantly lower gestational age at birth (34.4 vs. 38.0 weeks, $p < 0.01$), lower frequency of neonatal hydrocephalus (20.3% vs. 84.6%, $p < 0.01$), and lower need for VPS (10.9% vs. 65.6%, $p < 0.01$) or neonatal neuroendoscopy for third ventriculostomy (9.37% vs. 19.0%, $p = 0.12$).



Conclusions:

Late open intrauterine spina bifida repair after 26 weeks is associated with lower rate of hydrocephalus needing surgical treatment than postnatal surgical repair.