Prenatal Repair of Myelomeningocele

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Description

The myelomeningocele (MMC) is a failure in embryo development during the fourth week of gestation, being the most common form of spinal dysraphism characterized by a protrusion of the meninges, roots and spinal cord by a bony midline defect [1,2]. The MMC treatment is surgical and should be implemented as soon as possible in order to reduce the exposure of the neural tissue and consequently the risk of infections and worsening of neurological deficits [3,4]. The incidence of hydrocephalus is higher in cases of neonates whose surgical repair of MMC is done after the child's birth (postnatal repair of myelomeningocele), when compared to the group of children undergoing intrauterine surgery [4]. For children whose correction and closing of the MMC is still done during intrauterine life (known as intrauterine fetal open surgery; (Figure 1), the incidence of hydrocephalus can be reduced by 50%, as well as motor deficits [4]. In Figure 1 we show the image of the first fetal neurosurgery performed in the northeast region of Brazil, with excellent result [5].

Figure 1: Intrauterine fetal open surgery.

References