

A case of meningocele diagnosed in the first trimester

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Objective

Meningocele, widely known as spina bifida, is the most frequent type of neural tube defects. They are not always covered with skin and are usually accompanied by spinal nerve paralysis. The incidence is 0.5-1 in 1000 births. The aetiology is unknown and likely multifactorial. Meningocele are associated with maternal obesity, diabetes mellitus, short interval between pregnancies, hyperhomocysteinemia and medications such as anti-convulsants and anti-histamines during pregnancy. There is also an association with low socioeconomic status, positive family history and multiple pregnancies. Interestingly, it is more prevalent in female fetuses.

Methods

Meningocele are usually diagnosed in the second trimester. Ultrasonographic findings include larger than expected biparietal diameter measurement, lemon and banana signs, lateral ventriculomegaly, Chiari type 2 II abnormality which is defined as herniation of cerebellum and brain stem, obliteration of cisterna magna, displacement of the dorsal vertebral structures and the presence of meningocele. Recently, the loss of intracranial translucency in the sagittal plan has been considered an early ultrasonographic marker of spina bifida.

Results

Meningocele are usually diagnosed in the second trimester. Ultrasonographic findings include larger than expected biparietal diameter measurement, lemon and banana signs, lateral ventriculomegaly, Chiari type 2 II abnormality which is defined as herniation of cerebellum and brain stem, obliteration of cisterna magna, displacement of the dorsal vertebral structures and the presence of meningocele. Recently, the loss of intracranial translucency in the sagittal plan has been considered an early ultrasonographic marker of spina bifida.

Conclusion

Although meningocele are usually diagnosed in the second trimester, this case report demonstrates that, by meticulous ultrasonographic examination, it is feasible to recognise the fetal pathology in the first trimester. The timing of diagnosis is crucial in counselling, as parents are provided with early alternatives about the pregnancies.

