

论著

## 产前三维超声定量分析Dandy-Walker综合征胎儿小脑蚓部的辅助诊断价值

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**摘要** 摘要:目的 探讨产前三维超声第三平面成像方法定量分析Dandy-Walker综合征胎儿小脑蚓部发育的辅助诊断价值。方法 采用经腹三维超声方法观察和比较571例正常中晚孕早期胎儿和39例Dandy-Walker综合征胎儿小脑蚓部,采用小脑蚓部最大切面面积指标分析正常胎儿小脑蚓部面积与孕周的关系,比较正常与异常组测量数据。结果 经腹三维超声第三平面成像方法成功检测529例正常胎儿小脑蚓部最大切面面积,其测值与孕周呈正相关( $r_2=0.854, P<0.05$ )。39例Dandy-Walker综合征包括14例Dandy-Walker畸形(DWM)和25例Dandy-Walker变异型(DWV),其中12例DWM和2例DWV未显示蚓部结构,其余蚓部切面面积均明显小于相应孕周正常测值。结论 三维超声第三平面成像能够克服二维扫描难以获取胎儿头颅正中矢状切面的不足,得到满意的小脑正中矢状切面图像,有助于分析正常和异常小脑蚓部发育的变化规律,为DWS的产前诊断提供一个新的量化指标。

**关键词** [胎儿](#); [Dandy-Walker综合征](#); [小脑蚓部](#); [三维超声](#)

分类号

## Quantitative Analysis of Cerebellar Vermis in Fetuses with Dandy-Walker Syndrome with Three-dimensional Ultrasonography

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**Abstract** ABSTRACT:Objective To evaluate the third plane image of the three-dimensional sonography (3D US) for the quantitative analysis of the cerebellar vermis in normal and Dandy-Walker syndrome (DWS) fetuses. Methods The cerebellar vermis was scanned with trans-abdominal 3D US in the second and third trimesters in 571 normal fetuses and 39 fetuses with Dandy-Walker syndrome. The surface area of the vermis in the mid-sagittal view was measured and calculated. The correlation between the vermian area and the pregnant week was analyzed. The data of vermian area between normal and DWS fetuses was compared. Results The vermian area was measured in 529 normal fetuses in the third plane of 3D US. The vermis grew in a linear fashion throughout pregnancy and the growth pattern positively correlated with the gestational age ( $r_2=0.854, P<0.05$ ). In 39 fetuses with DWS, including 14 with Dandy-Walker malformation (DWM) and 25 with Dandy-Walker variant (DWV), no vermian structure was showed in the mid-sagittal plane in 12 fetuses with DWM and 2 fetuses with DWV, whereas a small vermis appeared in other DWSs. Conclusions The third plane image obtained by 3D US is valuable in studying the fetal cerebellar vermis during the middle and late pregnancy. Knowledge of normal and abnormal vermian appearance may help identify developmental anomalies. Measurement of vermian area in the third plane with 3D US provide a quantitative indicator for prenatal diagnosis of DWS.

**Key words** [fetus](#) [Dandy-Walker syndrome](#) [vermis cerebelli](#) [three-dimensional ultrasound](#)

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