中国医学影像技术
CHINESE JOURNAL OF MEDICAL IMAGING TECHNOLOGY

苏珊珊,吕国荣.三维超声检测宫内缺氧胎儿颅脑和肾脏血流灌注[J].中国医学影像技术,2012,28(11):2049~2052

三维超声检测宫内缺氧胎儿颅脑和肾脏血流灌注

Assessment of fetal cerebral and renal blood flow perfusion in hypoxic fetuses with three-dimensional ultrasonography

投稿时间： 2012-06-14 最后修改时间： 2012-09-18

DOI：

中文关键词：超声检查,产前 超声检查,三维 胎儿 血流容积 缺氧

英文关键词:Ultrasonography, prenatal Ultrasonography, three-dimensional Fetus Blood flow volume Hypoxia

基金项目:国家自然科学基金(81271587),2010年泉州市优秀人才培养专项经费(10A12)。

作者	单位	E-mail
苏珊珊	福建医科大学附属第二医院超声科,福建 泉州 362000	
吕国荣	福建医科大学附属第二医院超声科,福建 泉州 362000	lgr_feus@sina.com

中文摘要:

目的 探讨三维超声在诊断孕中晚期胎儿宫内缺氧中的应用价值。方法 应用三维超声检测60胎25~32孕周正常胎儿(正常对照组)的颅脑血流容积指数(CVf)及肾脏血流容积指数(RVf),并计算二者的比值(Vi=CVf/RVf),采用直线回归分析各测量值与孕龄的关系。随机抽取20胎胎儿,采用组内相关系数分析测量的重复性及一致性。以同期检出的73胎宫内缺氧胎儿作为缺氧组,测量其CVf、RVf及Vi,并与正常对照组进行比较。结果 ①正常对照组CVf与孕龄呈正相关(r=0.831,P<0.05),RVf与孕龄呈正相关(r=0.737,P<0.05),Vi与孕龄无相关性(r=0.015,P=0.910);②同一医师及不同医师测量CVf和RVf的重复性及一致性良好(ICC均>0.9);③胎儿宫内缺氧时,CVf增加,RVf减少,Vi增大,与正常对照组比较差异均有统计学意义(P均<0.01)。结论 三维超声可以准确测量胎儿颅脑和肾脏血流容积,对于诊断胎儿宫内缺氧有很好的临床应用价值。

英文摘要:

Objective To explore the application value of three-dimensional ultrasonography (3D US) in diagnosis of fetal intrauterine hypoxia. **Methods** Sixty normal singleton fetuses (normal control group) between 25 and 32 gestational weeks underwent transabdominal 3D US. Cerebral blood flow volume index (CVf), renal blood flow volume index (RVf) and the ratio of them (Vi=CVf/RVf) were measured. The correlation between CVf, RVf, Vi and gestational age (GA) were analyzed with linear regression. Repeatability and consistency of the measurements were analyzed in 20 randomly selected fetuses from normal control group. Moreover, the CVf, RVf and Vi were measured in 13 fetuses with intrauterine hypoxia (hypoxia group) and compared with those of normal control group. **Results** ①In normal control group, CVf and RVf were both strongly correlated with GA (CVf, r=0.831, P<0.05; RVf, r=0.737, P<0.05), but there was no correlation between Vi and GA (r=0.015, P=0.910). ②The repeatability and consistency of CVf and RVf obtained from the same operator and different operators were both good (all ICC value>0.9). ③Compared with those in normal control group, CVf and Vi in hypoxia group significantly increased, while RVf significantly reduced (all P<0.01). **Conclusion** 3D US can be used to measure CVf and RVf accurately, therefore having high application value in the diagnosis of fetal intrauterine hypoxia.

查看全文 查看/发表评论 下载PDF阅读器