

论著

母血AFP和胎儿大脑中动脉收缩期血流峰值对评估胎儿贫血的作用

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收稿日期 2009-3-23 修回日期 2009-6-24 网络版发布日期 2010-3-16 接受日期 2009-6-24

摘要 目的: 探讨胎儿宫内贫血母血AFP(MSAFP)水平和胎儿大脑中动脉收缩期血流峰值(MCA-PSV)的相关性并用胎儿血红蛋白(FHB)值验证其相关性, 评价MSAFP和MCA-PSV对胎儿贫血病例的临床预测和监护意义。方法: 对32例怀疑有胎儿贫血病例(自体免疫性胎儿贫血4例, 地中海贫血11例, B19微小病毒感染10例, 胎盘血管瘤7例)进行55次MSAFP和MCA-PSV测量, 对于MCA-PSV异常病例抽取脐带血, 共获得19份胎儿血液标本, 测定FHB含量。结果: MSAFP与MCA-PSV有相关性($n=55, r=0.57, P<0.01$)。19例胎儿血标本检查共15例贫血标本, 其中4例假阳性病例的MSAFP正常。贫血胎儿的MSAFP明显高于非贫血胎儿, 地中海贫血和免疫溶血性贫血病例MSAFP升高比MCA-PSV升高早15-20 d, B19病毒感染和胎盘血管瘤导致的贫血病例MSAFP升高则比MCA-PSV晚10-12 d($P<0.05$)。MSAFP($r=-0.87$)和MCA-PSV($r=-0.67$)与FHB水平有相关性。结论: 胎儿宫内贫血时MSAFP水平升高的时间和程度比MCA-PSV的变化更具有预测和监护意义, 而且两者间呈相关性。因此, MSAFP和MCA-PSV可能是临床预测和监护不同程度胎儿宫内贫血最有价值的联合测量指标。

关键词 [胎儿贫血](#) [甲胎蛋白类](#) [胎儿大脑中动脉收缩期血流峰值](#)

分类号 [R71](#)

Relationship between maternal serum alpha-fetoprotein and fetal middle cerebral artery peak systolic velocity in pregnancy with fetal anaemia

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Abstract

AIM: To evaluate the relationships between maternal serum alpha-fetoprotein (MSAFP) levels and middle cerebral artery peak systolic velocity (MCA-PSV) in pregnancies with fetal anaemia and to compare the sensitivities of MSAFP and MCA-PSV for the predicting the risk of fetal anaemia. METHODS: Fifty-five measurements of MSAFP and MCA-PSV were carried out in 32 women at risk of fetal anaemia (4 cases of alloimmunisation, 11 cases of thalassemia, 10 cases of parvovirus infection and 7 cases of placental chorioangioma). The relationship between MSAFP and MCA-PSV was studied, and 19 fetal blood samples, in which MCA-PSV measurements were abnormal, were taken and the fetal haemoglobin were tested in order to evaluate the correlation of MSAFP and MCA-PSV. RESULTS: A correlation between MSAFP and MCA-PSV ($n=55, r=0.57, P<0.01$) was observed, in which 15 cases of fetal anaemia and 4 cases false positive (non-anaemia) were detected among the 19 fetal blood samples. The MSAFP levels of 4 false-positive cases were normal. The MSAFP levels in 15 fetal anaemia cases were higher than those in non-anaemia. The elevation of MSAFP level was 15-20 d earlier than that of MCA-PSV in the cases of alloimmunisation and thalassemia, and it was 10-12 d later in the cases of parvovirus infection and placental chorioangioma significantly ($P<0.05$). Both MSAFP ($r=-0.87$) and MCA-PSV ($r=-0.67$) were significantly correlated with fetal haemoglobin level. CONCLUSION: The MSAFP level is significantly correlated with both MCA-PSV measurements and fetal haemoglobin. The time and process of the elevations of MSAFP indicate that MSAFP is more sensitive than MCA-PSV to predict and monitor the pregnancies at the risk of fetal anaemia.

Key words [Fetal anaemia](#) [Alpha-fetoproteins](#) [Fetal middle cerebral artery peak systolic velocity](#)

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