

[1]杨霄,罗丹,冯丹,等.胎儿肺成熟度与早产儿心力储备的相关性研究[J/CD].中华妇幼临床医学杂志(电子版),2014,(02):155-160.

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## 胎儿肺成熟度与早产儿心力储备的相关性研究(PDF)

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**Title:** Correlation Analysis Between Fetal Lung Maturity and Cardiac Contractility Reserve of Premature Infants

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**关键词:** [心力储备](#); [心肌收缩](#); [胎儿器官成熟度](#); [心音](#); [婴儿](#); [早产](#)

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**摘要:** 目的 探讨早产儿胎儿肺成熟度和心力储备(CCR)间的相关性。方法 选择2008年7月至2009年8月于四川大学华西第二医院产科住院分娩的36例出生后2 h以内早产儿为研究对象,采用羊水泡沫试验及羊水板层小体计数(LBC)检测本组早产儿的胎儿肺成熟度;根据胎儿肺成熟度,将其分为胎儿肺不成熟组( $n=17$ ),胎儿肺可疑成熟组( $n=3$ )和胎儿肺成熟组( $n=16$ )。采用心音图实验(PCGT)检测CCR指标,包括第一心音幅值(S1)与第二心音幅值(S2)的比值(S1/S2)、心脏舒张期时限(D)与收缩期时限(S)的比值(D/S)和应激后心力变化趋势(CCCTS);采用线性回归分析各指标与早产儿胎儿肺成熟度之间的相关性(本研究遵循的程序符合四川大学华西第二医院人体试验委员会制定的伦理学标准,得到该委员会批准,分组征得受试对象监护人知情同意,并与监护人签署临床研究知情同意书)。各组早产儿出生体质量、身长等一般情况比较,差异无统计学意义( $P>0.05$ )。结果 早产儿胎儿肺成熟度与孕龄成正相关( $r=0.536$ ,  $P=0.001$ );3组间S1/S2和CCCTS比较,其差异无统计学意义( $H=0.013, 1.651$ , 均 $P>0.05$ );3组间D/S比较,仅胎儿肺成熟早产儿组较胎儿肺不成熟早产儿组高,其差异有统计学意义( $q=0.088$ ,  $P=0.023$ )。CRR指标与胎儿肺成熟度的偏相关分析结果显示,早产儿胎儿肺成熟度与S1/S2、CCCTS不相关( $r=0.189, 0.289$ , 均 $P>0.05$ );与D/S成正相关( $r=0.401, P=0.017$ )。结论 成熟的胎儿肺发育可使早产儿心肌灌注时间延长,心肌获得较多氧气和营养,使其CCR较高;胎儿肺不成熟早产儿CCR低,出生后应加强对心脏功能的保护。通过对D/S和胎儿肺成熟度相关关系的深入研究,有可能找到判断胎儿肺成熟度的新方法。

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Abstract:

Objective To study the correlation between fetal lung maturity and cardiac contractility reserve (CCR) of premature infants. [WTHZ]Methods A total of 36 cases of premature infants within 2 h after birth who were hospitalized delivery in West China Second University Hospital, Sichuan University from July 2008 to August 2009 were investigated in this study. Use foam test of amniotic fluid and amniotic fluid lamellar body count(LBC) to detect fetal lung maturity. According to the fetal lung maturity,they were divided into fetal lung immature group( n =17),fetal lung questionable mature group( n =3) and fetal lung mature group ( n =16). Use phonocardiogram test to measure CCR which included: first heart sound amplitude/second heart sound amplitude(S1/S2),diastolic phase/systolic phase (D/S) and cardiac contractility change trend after stimulation (CCCTS) .The linear regression analysis was used to analyze the correlation between the fetal lung maturity and CCR of the premature infants. The study protocol was approved by the Ethical Review Board of Investigation in Human Beings of West China Second University Hospital, Sichuan University .Informed consent was obtained from the parents of each participating patient.The general statistics such as birth weight and length in each group had no significant difference ( P >0.05). [WTHZ]Results The fetal lung maturity has positive correlation with the gestational age ( r =0.536, P =0.001) .Compare S1/S2 and CCCTS of three groups ,had no significant difference ( H =0.013, 1.651, P >0.05) , while the D/S of premature infants had significant difference between fetal lung immature group and fetal lung mature group ( q =0.088, P =0.023) .The lung maturity had no correlation with the S1/S2 and CCCTS ( r =0.189 2, 0.289 0, P >0.05) ,and had positive correlation with the D/S( r =0.401 4, P =0.017). [WTHZ]Conclusions The more mature the fetal lung is,the longer time for myocardial perfusion,and more oxygen or nutrition cardiac muscle get can make higher CCR of premature infants.It is necessary to strengthen the heart care for the premature infants,especially those with immature fetal lung.In addition,it showed through the father study about the correlation between D/S and fetal lung maturity,maybe we could find a new way to test the fetal lung maturity.

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参考文献/REFERENCES

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