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论著

常规与微创冠脉搭桥术围手术期血浆S100-B蛋白水平的相关研究

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摘要 目的: 通过测定体外循环和非体外循环条件下冠脉搭桥术患者血浆S100-B蛋白水平的变化，比较2种手术方式对脑损伤程度有无不同，探讨术中影响血浆S100-B蛋白水平变化的相关因素。方法: 30例择期行冠脉搭桥术的患者，分为体外循环组（CPB group，A组）和微创非体外循环组（non-CPB group，B组）,每组均为15例。于术前、麻醉后、主动脉侧壁钳开放时、术毕时、术后2 h、6 h、12 h和24 h采血测血浆S100-B蛋白浓度。结果： （1） 两组患者血浆S100-B蛋白浓度均在升主动脉侧壁钳开放时显著高于术前，且A组患者血浆S100-B蛋白浓度峰值是B组的3倍多（2.32±0.26 μg/L和0.71±0.14 μg/L）,之后逐渐降低，到术后24 h基本接近正常。（2） 术中患者血浆S100-B蛋白升高水平与体外循环转机时间或心表手术操作时间呈正相关（A组：r＝0.659，P＜0.05;B组：r＝0.584, P＜0.05）。结论： 血浆S100-B蛋白水平可以用来评价2种冠脉搭桥术对脑的损伤程度，术后连续检测对于诊断脑损伤并及时采取相应预防措施具有重要价值;非体外循环微创冠脉搭桥术较常规体外循环下手术更能够有效降低对脑损伤的程度和术后出现神经功能障碍的风险。

关键词 S100-B 蛋白质； 冠状动脉分流术； 脑损伤

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Serum concentration of S100-B protein in patients during CABG with or without cardiopulmonary bypass

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Abstract

<FONT face=Verdana>AIM: To investigate the mutative law of the serum S100-B protein in patients undergone coronary artery bypass grafting with or without cardiopulmonary bypass (CPB-CABG or non-CPB CABG), and to compare the degree of cerebral injury in patients during CABG between the two different surgical manipulations.
METHODS: 30 patients were divided into two groups: CPB-CABG group (group A) and non-CPB CABG group (group B). Every group included 15 patients. Blood from jugular vein was phlebotomized in every patients at the following 8 time points: before operation (OP), after anaesthesia, end of grafting, end of OP, 2 h after OP, 6 h after OP, 12 h after OP and 24 h after OP. The serum concentrations of S100-B protein in the samples were measured.
RESULTS: The level of serum S100-B protein increased markedly at the beginning of CABG, and the peak value of group A (2.32 μg/L±0.26 μg/L) was treble higher than that in the patients in group B (0.71 μg/L±0.14 μg/L). The levels of S100-B protein tend to normal level in both groups 24 h after OP. The level of S100-B protein had notable relation with the time of CABG in group A and the manipulative time on the heart in group B.
CONCLUSION: The degree of cerebral damage can be valued by investigating the mutative law of the serum S100-B protein in patients undergone CPB-CABG and non-CPB CABG. The non-CPB CABG reduces the degree of cerebral damage and avoids the functional disorder of central nerve.</FONT>

Key words S100-B protein Coronary artery bypass Brain injuries

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