[1]孙国林,李生德,齐萍,等.婴幼儿体外循环期间氨甲环酸血液浓度研究[J].第三军医大学学报,2013,35(01):69-72.

Sun Guolin,Li Shengde,Qi Ping,et al.Study of plasma concentration of tranexamic acid during cardiopulmonary bypass in infants with tetralogy of Fallot[J].J Third Mil Med Univ,2013,35(01):69-72.

点击复制

婴幼儿体外循环期间氨甲环酸血液浓度研究(PDF)

《第三军医大学学报》[ISSN:1000-5404/CN:51-1095/R] 卷: 35 期数: 2013年第01期 页码: 69-72
栏目: 论著 出版日期: 2013-01-15

Title: Study of plasma concentration of tranexamic acid during cardiopulmonary bypass in infants with tetralogy of Fallot

作者: 孙国林; 李生德; 齐萍; 文仁国; 肖颖彬
第三军医大学新桥医院全军心血管外科研究所; 青岛儿童医院麻醉科

Author(s): Sun Guolin; Li Shengde; Qi Ping; Wen Renguo; Xiao Yingbin
Department of Cardiovascular Surgery, Xinqiao Hospital, Third Military Medical University, Chongqing, 400037; Department of Anesthesia, Qingdao Children Hospital, Qingdao, Shandong Province, 266071, China

关键词: 氨甲环酸; 婴幼儿; 血药浓度; 磁共振波谱仪

Keywords: tranexamic acid; cardiopulmonary bypass; infant; ^{1}H-NMR

分类号: R654.1; R726.54; R969.11

DOI: -

文献标识码: A

摘要: 目的 研究婴幼儿法洛四联症（tetralogy of fallot,TOF）根治术体外循环(cardiopulmonary bypaass,CPB)期间应用氨甲环酸（tranexamic acid，TA）的血液浓度。 方法 5例先天性TOF患儿，体质量（7.36±2.08）kg，在开胸前应用TA 100 mg/kg，单次静脉缓慢注射（>10 min），CPB开始前再次注射100 mg/kg。应用磁共振波谱仪(^{1}H-NMR)方法，检测不同时间段TA的血液浓度。 结果 CPB开始前(负荷剂量用药后约20 min)、CPB开始后1 h、手术结束时的血液TA浓度分别为（224.61±195.28）、（509.58±181.57）、（243.95±32.30）μg/mL。CPB开始前与CPB开始后1 h及手术结束时TA浓度比较均无统计学差异（P=0.052、0.83）；CPB开始后1 h与手术结束时TA浓度有统计学差异（P=0.02）。 结论 ^{1}H-NMR能够检测出TA的血液浓度。TA大于抑制有高度出血风险可能需要的血液浓度125 μg/mL时，提示可降低剂量。

Abstract: Objective To study the plasma concentration of tranexamic acid (TA) during cardiopulmonary bypass in infants with tetralogy of Fallot (TOF). Methods Five TOF infants with body weight of (7.36±2.08) kg were given an slow intravenous injection of initial dose of TA (100 mg/kg, >10 min) before thoracotomy, following by another 100 mg/kg TA before the initiation of cardiopulmonary bypass (CPB). The concentration of TA was measured in blood plasma using ^{1}H-NMR spectroscopy. Results Plasma TA concentrations were (224.61±195.28) μg/mL before CPB (at 20 min after TA administration),

(509.58±181.57) μg/mL at 60 min after CPB initiation, and (243.95±32.30) μg/mL at the end of operation, respectively. The plasma TA concentration before CPB was not significantly different from that at 60 min after CPB initiation (*P*=0.052) and that at the end of operation (*P*=0.83), but there was significant difference between plasma TA concentration at 60 min after CPB initiation and that at the end of operation (*P*=0.02). Conclusion A 100 mg/kg initial dose of TA followed by an infusion of 100 mg/kg before the initiation of CPB is sufficient enough to provide an effective plasma concentration, which is higher than 125 μg/mL for patients with high risk of bleeding, indicating the dose of TA can be decreased.

参考文献/REFERENCES

孙国林，李生德，齐萍，等. 婴幼儿体外循环期间氨甲环酸血液浓度研究[J].第三军医大学学报,2013,35(1):69-72.

备注/Memo: -

更新日期/Last Update: 2012-12-31