

# 局部应用氨甲环酸减少肿瘤型人工膝关节置换术后失血的有效性 及安全性研究

《现代肿瘤医学》[ISSN:1672-4992/CN:61-1415/R] 期数: 2019年16期 页码: 2939-2942 栏目: 论著 (骨·软组织肿瘤) 出版日期: 2019-07-08

**Title:** Perioperative efficacy and safety of local application of tranexmic acid for bleeding after unilateral tumor knee arthroplasty

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**关键词:** 氨甲环酸; 肿瘤膝关节置换; 术后出血

**Keywords:** tranexamic acid; tumor-type knee replacement; postoperative hemorrhage

**分类号:** R739.96

**DOI:** 10.3969/j.issn.1672-4992.2019.16.034

**文献标识码:** A

**摘要:** 目的:探讨氨甲环酸局部关节腔内注射对减少肿瘤型人工膝关节置换术后失血的有效性 & 安全性。方法:回顾性分析从2016年1月至2017年10月因恶性肿瘤需要行肿瘤型人工膝关节置换并符合纳入标准的72例患者的病例资料,男47例,女25例,年龄11~49岁,平均年龄(26.8±11.9)岁,其中实验组为42例局部应用氨甲环酸1 g,并以30例未使用氨甲环酸为对照组,术前查血常规、凝血等指标及术后3天每天查血常规,并记录引流量,术后7天复查双下肢深静脉彩超。结果:实验组术后引流量 [股骨远端组为(263.5±86.5)ml,胫骨近端组为(288.1±71.5)ml] 以及隐性失血量 [股骨远端组为(867.9±294.2)ml,胫骨近端为(943.8±274.4)ml] 明显少于对照组 [股骨远端引流量为(333.6±94.8)ml,胫骨近端为(375.3±111.5)ml; 股骨远端组隐性出血量为(1 182.7±256.2)ml; 胫骨近端组为(1 174.0±292.1)ml], 差异均有统计学意义 (P < 0.05)。实验组 (股骨远端组输血率34.6%, 胫骨近端组为37.5%) 输血人数明显小于对照组 (股骨远端组输血率66.7%, 胫骨近端组为73.3%), 差异均有统计学意义 (P < 0.05)。两组患者在术后均未有血栓形成, 术后患肢周径变化方面差异无统计学意义 (P > 0.05)。结论:肿瘤型人工膝关节置换术后局部应用氨甲环酸明显减少术后出血量, 降低输血率, 降低患者围手术期的贫血相关并发症的风险, 且操作简单、安全、经济。

**Abstract:** Objective: To investigate the perioperative efficacy and safety of local application of tranexmic acid for bleeding after unilateral tumor-type knee arthroplasty. Methods: From January 2016 to October 2017, clinical data of 72 patients who received tumor knee arthroplasty were analyzed retrospectively, including 47 male and 25 female patients, age from 11 to 49 years (26.8±11.9). The patients in experimental group received 1 g tranexamic acid inside knee joint, and patients in control group did not receive tranexamic acid. The blood routine examination, coagulation and other indications were detected before operation and the blood routine was checked after operation every day for 3 days. The amounts of intraoperative blood loss, postoperative visible blood loss, blood transfusion record and preoperative and postoperative limb circumference changes were recorded. The double-leg deep venous ultrasound was used seven days after operation. Results: The postoperative drainage [Distal femur group (263.5±86.5)ml, the proximal tibia group (288.1±71.5)ml] and the amount of invisible blood loss [Distal femur group (867.9±294.2)ml, the proximal tibia group (943.8±274.4)ml] in the experimental group were significantly less than those in the control group [drainage for the distal femur group (333.6±94.8)ml and the proximal tibia group (375.3±111.5)ml, while the invisible blood loss from distal femur group (1 182.7±256.2)ml and the proximal tibia group (1 174.0±292.1)ml], with significant difference (P < 0.05). The number of blood transfusion in experimental group (Distal femur group 34.6%, the proximal tibia group 37.5%) was significantly less than that in control group (Distal femur group 66.7%, the proximal tibia group 73.3%), and the difference was statistically significant (P < 0.05). There was no significant difference in

postoperative thrombus incidence and postoperative limb circumference between the two groups ( $P > 0.05$ ). Conclusion: The local application of tranexamic acid intraoperatively in unilateral tumor knee arthroplasty patients could significantly reduce the amounts of postoperative blood loss and blood transfusion to avoid the perioperative anemia related complications. It is also safe, economic and easy to use during surgery.

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备注/Memo: -

更新日期/Last Update: 1900-01-01