

## • 临床论著 •

## 加速康复下肢关节置换深静脉血栓形成的相关因素

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**摘要:** [目的] 探讨加速康复下肢关节置换术后深静脉血栓 (deep vein thrombosis, DVT) 形成的相关因素。[方法] 2021年12月—2022年12月于本院行下肢关节置换的330例患者纳入本研究, 观察术后DVT的发生情况, 采用单因素和多因素二元逻辑回归分析探索DVT形成的相关因素。[结果] 330例患者中, 术后46例患者被诊断为下肢深静脉血栓, 血栓总体发生率为13.9%。血栓组患者年龄 $[(71.9\pm 7.2) \text{岁} \text{ vs } (64.4\pm 14.2) \text{岁}, P<0.001]$ 、女性占比[男/女, (7/39) vs (84/200),  $P=0.046$ ]、脑梗史占比[是/否, (12/34) vs (32/252),  $P=0.006$ ]及病因为OA [CD/ON/OA/RA/FX, (5/2/35/0/4) vs (42/50/157/10/25),  $P=0.048$ ]患者占比、术前CRP $[(9.3\pm 8.2) \text{ mg/L} \text{ vs } (3.5\pm 3.2) \text{ mg/L}, P<0.001]$ 、术后第1d CRP $[(21.4\pm 18.5) \text{ mg/L} \text{ vs } (14.7\pm 12.8) \text{ mg/L}, P=0.004]$ 显著高于非血栓组, 但术中失血量 $[(322.2\pm 225.4) \text{ ml} \text{ vs } (432.9\pm 298.6) \text{ ml}, P=0.005]$ 显著少于非血栓组, 术式为UKA、TKA、AFHR的患者占比[UKA/TKA/AFHR/THA, (13/22/2/9) vs (67/82/10/125),  $P=0.013$ ]显著高于非血栓组。多因素二元逻辑回归结果显示: 饮酒史 ( $OR=5.041, P=0.046$ )、术前CRP ( $OR=1.173, P=0.031$ )、年龄 ( $OR=1.078, P<0.001$ )、是下肢关节置换术后发生DVT的独立危险因素。[结论] 在加速康复理念指导下下肢关节置换术后, 除外肌间静脉血栓, 下肢其余类型深静脉血栓发生率较低。饮酒史、术前CRP、年龄是下肢关节置换术后DVT发生的独立危险因素。

**关键词:** 下肢关节置换, 加速康复, 深静脉血栓, 危险因素

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**Factors associated with deep vein thrombosis in lower extremity joint replacement following accelerated rehabilitation //** LIN Cai-yuan, LI Zhi-peng, ZHANG Zhi-guang, XIA Tian-wei, ZHANG Fu-cheng, SHEN Ji-rong. Affiliated Hospital, Nanjing University of Chinese Medicine, Nanjing 210029, China

**Abstract:** [Objective] To investigate the related factors for the formation of deep vein thrombosis (DVT) after lower limb joint replacement following accelerated rehabilitation. [Methods] A total of 330 patients who underwent lower limb joint replacement following accelerated rehabilitation in our hospital from December 2021 to December 2022 were included in this study to observe whether postoperative DVT occurred. The univariate comparison and multifactor binary logistic regression analysis was used to explore the factors related to DVT formation. [Results] Among the 330 patients, 46 patients were diagnosed with lower extremity deep vein thrombosis after operation, with the overall incidence of 13.9%. The DVT group proved significantly greater than the non-DVT group in terms of age  $[(71.9\pm 7.2) \text{ years} \text{ vs } (64.4\pm 14.2) \text{ years}, P<0.001]$ , the proportion of females [male/female, (7/39) vs (84/200),  $P=0.046$ ], the proportion of previous cerebral infarction [yes/no, (12/34) vs (32/252),  $P=0.006$ ] and proportion of disease as OA [CD/ON/OA/RA/FX, (5/2/35/0/4) vs (42/50/157/10/25),  $P=0.048$ ], preoperative CRP  $[(9.3\pm 8.2) \text{ mg/L} \text{ vs } (3.5\pm 3.2) \text{ mg/L}, P<0.001]$ , CRP a day postoperatively  $[(21.4\pm 18.5) \text{ mg/L} \text{ vs } (14.7\pm 12.8) \text{ mg/L}, P=0.004]$ . However, the former had significantly less intraoperative blood loss than the latter  $[(322.2\pm 225.4) \text{ ml} \text{ vs } (432.9\pm 298.6) \text{ ml}, P=0.005]$ . The DVT group had significantly higher ratio of UKA, TKA, and AFHR than the non-DVT group [UKA/TKA/AFHR/THA, (13/22/2/9) vs (67/82/10/125),  $P=0.013$ ]. As results of multivariate logistic regression, the alcohol consumption history ( $OR=5.041, P=0.046$ ), preoperative CRP ( $OR=1.173, P=0.031$ ), and age ( $OR=1.078, P<0.001$ ) were the independent risk factor for DVT after lower limb joint replacement. [Conclusion] After lower limb joint replacement following accelerated rehabilitation, the incidence of other types of deep vein thrombosis of lower limb is low except for intermuscular vein thrombosis. Alcohol consumption history, preoperative CRP and age are independent risk factors for DVT after lower limb joint replacement.

**Key words:** lower limb joint replacement, accelerated rehabilitation, deep vein thrombosis, risk factors