

· 临床论著 ·

全膝置换术后症状性深静脉血栓危险因素[△]

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摘要: [目的] 探讨全膝关节置换 (total knee arthroplasty, TKA) 术后症状性深静脉血栓 (deep vein thrombosis, DVT) 发生的危险因素。[方法] 2018年—2023年于遵义市第一人民医院关节外科行 TKA 治疗的 926 例患者纳入研究。观察血栓的发生情况。采用单因素比较和多元逻辑回归分析探索 DVT 发生的危险因素。[结果] 926 例患者中, 76 例术后临床与超声检查确诊为症状性 DVT, 发生率为 8.2% (76/926); 1 例肺动脉 CTA 检查确诊为肺动脉栓塞, 发生率为 0.1% (1/926)。血栓组患者男性占比 [男/女, (23/53) vs (147/703), $P=0.006$]、吸烟者占比 [是/否, (14/62) vs (75/775), $P=0.008$]、合并高血压 [是/否, (50/26) vs (413/437), $P=0.004$]、心率失常 [是/否, (7/69) vs (33/817), $P=0.029$] 及下肢静脉瓣膜功能不全 [是/否, (57/19) vs (488/362), $P=0.004$] 的比率、术中失血量 [(151.4±77.9) ml vs (136.0±62.3) ml, $P=0.045$]、血小板/淋巴细胞比值 (platelet/lymphocyte ratio, PLR) [(168.5±96.3) vs (135.5±59.7), $P=0.045$]、中性粒细胞/淋巴细胞比值 (neutrophil/lymphocyte ratio, NLR) [(2.9±2.0) vs (2.3±1.7), $P=0.010$]、ESR [(20.6±19.2) mm/h vs (15.7±11.7) mm/h, $P=0.002$]、PT [(11.5±1.3) s vs (11.3±0.8) s, $P=0.007$]、Fbg [(3.6±2.2) g/L vs (3.0±0.7) g/L, $P<0.001$]、CRP [(21.8±27.4) mg/L vs (12.6±7.4) mg/L, $P<0.001$] 显著高于无症状组, 而 INR [(1.0±0.1)% vs (1.1±0.1)%], $P=0.007$]、TT [(16.6±2.0) s vs (17.0±1.1) s, $P=0.030$] 显著低于无症状组 ($P<0.05$)。多因素逻辑回归分析显示, 吸烟 ($OR=2.330$, $P=0.008$)、下肢静脉瓣膜功能不全 ($OR=2.230$, $P=0.027$)、PLR ($OR=1.840$, $P<0.001$)、高血压 ($OR=1.240$, $P<0.001$)、CRP ($OR=1.040$, $P=0.031$) 为 TKA 术后症状性 DVT 的危险因素。[结论] 本研究发现吸烟、下肢静脉瓣膜功能不全、PLR、高血压、CRP 为 TKA 术后症状性 DVT 的危险因素, 应引起临床医生注意。

关键词: 膝关节骨性关节炎, 全膝关节置换术, 症状性深静脉血栓, 危险因素

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Risk factors for symptomatic deep vein thrombosis after total knee arthroplasty // CHEN Shi-da, WAN Yu, YANG Zhi-hang, LUO Yan-fei, DENG Jiang. The First People's Hospital of Zunyi City, Zunyi Medical University, Zunyi 563000, China

Abstract: [Objective] To explore the risk factors for symptomatic deep vein thrombosis (DVT) after total knee arthroplasty (TKA). [Methods] A total of 926 patients who underwent TKA in the First People's Hospital of Zunyi City from 2018 to 2023 were included in the study. The occurrence of DVT was determined by clinical and ultrasound and the risk factors for DVT occurrence were searched by using univariate comparison and multiple logistic regression analysis. [Results] Among 926 patients, 76 were diagnosed with symptomatic DVT by postoperative clinical and ultrasound examinations, with an incidence of 8.2% (76/926); while 1 case was diagnosed with pulmonary embolism by pulmonary artery CTA examination, with an incidence of 0.1% (1/926). Regarding univariate comparison, the DVT group proved significantly greater in terms of proportion of male [male/female, (23/53) vs (147/703), $P=0.006$], the proportion of smokers [yes/no, (14/62) vs (75/775), $P=0.008$], concomitant hypertension [yes/no, (50/26) vs (413/437), $P=0.004$], arrhythmia [yes/no, (7/69) vs (33/817), $P=0.029$], and lower limb venous valve dysfunction [yes/no, (57/19) vs (488/362), $P=0.004$], and intraoperative blood loss [(151.4±77.9) ml vs (136.0±62.3) ml, $P=0.045$], platelet/lymphocyte ratio (PLR) [(168.5±96.3) vs (135.5±59.7), $P=0.045$], neutrophil/lymphocyte ratio (NLR) [(2.9±2.0) vs (2.3±1.7), $P=0.010$], ESR [(20.6±19.2) mm/h vs (15.7±11.7) mm/h, $P=0.002$], PT [(11.5±1.3) s vs (11.3±0.8) s, $P=0.007$], Fbg [(3.6±2.2) g/L vs (3.0±0.7) g/L, $P<0.001$], CRP [(21.8±27.4) mg/L vs (12.6±7.4) mg/L, $P<0.001$], while significantly less in terms of INR [(1.0±0.1)% vs (1.1±0.1)%], $P=0.007$] and TT [(16.6±2.0) s vs (17.0±1.1) s, $P=0.030$] than the asymptomatic group ($P<0.05$). As results of multivariate logistic regression, smoking ($OR=2.330$, $P=0.008$), lower limb venous valve insufficiency ($OR=2.230$, $P=0.027$), PLR ($OR=1.840$, $P<0.001$), hypertension ($OR=1.240$, $P<0.001$), and CRP ($OR=1.040$, $P=0.031$) were risk factors for symptomatic DVT after TKA. [Conclusion] This

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