

Inpatient falls after total knee arthroplasty: the role of anesthesia type and peripheral nerve blocks

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ABSTRACT

Background: Much controversy remains on the role of anesthesia technique and peripheral nerve blocks (PNBs) in inpatient falls (IFs) after orthopedic procedures. The aim of the study is to characterize cases of IFs, identify risk factors, and study the role of PNB and anesthesia technique in IF risk in total knee arthroplasty patients. **Methods:** The authors selected total knee arthroplasty patients from the national Premier Perspective database (Premier Inc., Charlotte, NC; 2006–2010; n = 191,570, >400 acute care hospitals). The primary outcome was IF. Patient- and healthcaresystem-related characteristics, anesthesia technique, and presence of PNB were determined for IF and non-IF patients. Independent risk factors for IFs were determined by using conventional and multilevel logistic regression. **Results:** Overall, IF incidence was 1.6% (n = 3,042). Distribution of anesthesia technique was 10.9% neuraxial, 12.9% combined neuraxial/general, and 76.2% general anesthesia. PNB was used in 12.1%. Patients suffering IFs were older (average age, 68.9 vs. 66.3 yr), had higher comorbidity burden (average Deyo index, 0.77 vs. 0.66), and had more major complications, including 30-day mortality (0.8 vs. 0.1%; all P < 0.001). Use of neuraxial anesthesia (IF incidence, 1.3%; n = 280) had lower adjusted odds of IF compared with adjusted odds of IF with the use of general anesthesia alone (IF incidence, 1.6%; n = 2,393): odds ratio, 0.70 (95% CI, 0.56–0.87). PNB was not significantly associated with IF (odds ratio, 0.85 [CI, 0.71–1.03]). **Conclusions:** This study identifies several risk factors for IF in total knee arthroplasty patients. Contrary to common concerns, no association was found between PNB and IF. Further studies should determine the role of anesthesia practices in the context of fall-prevention programs. (*Anesthesiology* 2014; 120:551-63)

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RESUMO

Os pacientes submetidos à cirurgia de artroplastia total de joelho apresentam risco aumentado de quedas, em período pós-operatório, que aumentam a morbidade e mortalidade. O papel da escolha da técnica anestésica e dos bloqueios periféricos permanecem controversos na incidência dessas quedas. O objetivo deste estudo é caracterizar as quedas pós artroplastia total de joelho, identificar os fatores de risco e a influência das técnicas anestésicas e dos bloqueios periféricos. O estudo selecionou, através da base de dados nacional, 191570 pacientes submetidos à cirurgia eletiva de artroplastia total de joelho entre os anos de 2006 e 2010. Foram estratificadas as características e comorbidades dos pacientes, os tipos de técnicas anestésicas utilizadas e se foram realizados bloqueios de nervos periféricos nos procedimentos. Uma análise multivariável foi realizada para identificar os fatores de risco. A incidência de quedas foi de 1,6%. Os fatores de risco evidenciados foram: idade avançada, maior número de comorbidades e anestesia geral isolada. Ao contrário do que era suposto em alguns trabalhos prévios, pacientes submetidos à bloqueios de nervos periféricos não apresentaram maior risco de queda.

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