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Letters to the Editors

Letter to the Editor on “Rate of Transfusions Following Total Knee Arthroplasty in Patients Receiving Lovenox or High Dose Aspirin”



To the Editor:

We had the opportunity to read the article by Miller et al [1] addressing the rate of transfusion in patients receiving 2 different regimes of thromboprophylaxis after knee arthroplasty. We acknowledge the authors' endeavor to conduct such an interesting retrospective analysis. They report a remarkable statistically significant difference in both hemoglobin and hematocrit drops and the rate of transfusion between groups. We consider that these findings are also clinically significant as postoperative anemia remains one of the most common complications after major orthopedic surgery [2].

On the other hand, we would like to draw attention to one of the main conclusions from this study. Miller et al [1] suggest that aspirin and low-molecular-weight heparin exhibit similar efficacy in preventing venous thromboembolism (VTE). However, this conclusion might be misleading because it is very likely to be a result of a type II error: the statistical power of the study is not sufficient to demonstrate differences between both agents in regard to prevention of VTE.

This observation arises from 2 facts. First, because of a more profound understanding of this condition and the implementation of thromboprophylaxis as a standard of care, the incidence of VTE has decreased over time [3]. Although it is not yet considered a rare complication, proving differences (or no differences) when comparing 2 regimes of thromboprophylaxis, requires larger sample sizes.

Second, the authors reported deep vein thrombosis and pulmonary embolism during a mean length of stay between 2.44 ± 1.24 and 3.19 ± 2.85 for unilateral knee arthroplasty. Although their findings are similar to previous reports [4], Warwick et al [5] demonstrated that most cases of VTE occur after hospital discharge. Therefore, concluding the true efficacy of either aspirin or low-molecular-weight heparin for the prevention of VTE also requires a longer follow-up.

In conclusion, this article should aware practitioners about the importance of postoperative anemia after knee arthroplasty.

However, its lack of statistical power does not allow us to suggest conclusions regarding the efficacy of the different agents. Consequently, the choice of the type of chemoprophylaxis for VTE prevention must be decided considering other type of studies specifically designed to compare the previously mentioned outcomes.

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References

1. Miller KN, Wages J, Hall KE, et al. Rate of transfusions following total knee arthroplasty in patients receiving Lovenox or high dose aspirin. *J Arthroplasty* 2016. <http://dx.doi.org/10.1016/j.arth.2015.10.023>.
2. Ahmed I, Chan JKK, Jenkins P, et al. Estimating the transfusion risk following total knee arthroplasty. *Orthopedics* 2012;35:e1465.
3. Xing KH, Morrison G, Lim W, et al. Has the incidence of deep vein thrombosis in patients undergoing total hip/knee arthroplasty changed over time? A systematic review of randomized controlled trials. *Thromb Res* 2008;123:24.
4. Januel J, Chen G, Ruffieux C. Symptomatic in-hospital deep vein thrombosis and pulmonary embolism following hip and knee arthroplasty among patients receiving recommended prophylaxis. A systematic review. *J Am Med Assoc* 2012;307:294.
5. Warwick D, Friedman RJ, Agnelli G, et al. Insufficient duration of venous thromboembolism prophylaxis after total hip or knee replacement when compared with the time course of thromboembolic events: findings from the Global Orthopaedic Registry. *J Bone Joint Surg Br* 2007;89:799.

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