

Paper #2

Low-Dose Aspirin is as Safe and Effective a Prophylaxis as High-Dose Aspirin for Venous Thromboembolism after Total Hip Arthroplasty

Mhamad Faour, MD, Nicolas S. Piuizzi, MD, David P. Brigati, MD, Alison K. Klika, MS, Michael A. Mont, MD, Wael K. Barsoum, MD, Carlos A. Higuera, MD

Introduction: Aspirin has been established as an effective prophylactic agent after total hip arthroplasty (THA). Low-dose aspirin is effectively utilized in the prevention of cerebrovascular and cardiovascular events. There is no consensus as to the optimal prophylactic dose for prevention of venous thromboembolic events (VTEs) after THA. The study aimed to compare the effect of low-dose aspirin to high-dose aspirin in terms of VTE incidence, bleeding and mortality after THA.

Methods: We retrospectively reviewed 7,488 medical records for primary THA patients between 2012 and 2016. We identified 3,936 patients who received enteric-coated aspirin twice daily after surgery for 4 to 6 weeks depending on surgeons' preference. A total of 1,033 patients received 81-mg and 2,903 patients received 325-mg aspirin. Complications collected within 90 days after surgery were: VTEs (deep vein thrombosis [DVT] and pulmonary embolism [PE]), bleeding (gastrointestinal and wound) and mortality. We used multivariate regression to evaluate the effect of aspirin dose. We adjusted for age, gender, body mass index, Charlson Comorbidity Index (CCI) score, and hospital length of stay (LOS).

Results: Age, gender, CCI, and LOS were significantly different between the two groups. There was no statistically significant difference between low-dose vs high-dose groups in terms of VTE (0.68% vs 1.00%. $p=0.35$), DVT (0.58% vs 0.79%. $p=0.49$), PE (0.19% vs 0.34%. $p=0.45$), bleeding (0.19% vs 0.14%. $p=0.69$), or mortality (0.10% vs 0.14%. $p=0.75$). After adjusting for confounders, low-dose vs high-dose aspirin was not associated with increased risk for VTEs (OR=0.66, 95%CI [0.29-1.52], $p=0.31$), DVT (0.72, [0.29-1.78], $p=0.46$), PE (0.54, [0.12-2.46], $p=0.39$), bleeding (1.30, [0.23-7.29], $p=0.76$) or mortality (0.56, [0.06-5.26], $p=0.59$) within 90 days after THA.

Conclusion: Low-dose aspirin was not inferior to high-dose aspirin for the prevention of VTE after THA. Low-dose aspirin can be considered a safe and effective agent in the prevention of VTE.

Notes
