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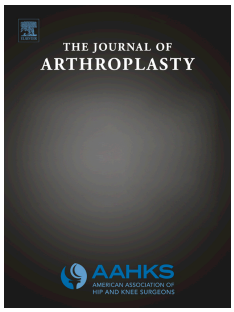

Is there a role for pre-operative iron supplementation in patients preparing for a total hip or total knee arthroplasty?

Stephen Petis, MD, MSc, FRCSC, Brent Lanting, MD, MSc, FRCSC, Edward Vasarhelyi, MD, MSc, FRCSC, Douglas Naudie, MD, FRCSC, Fiona Ralley, MBChB, FFA, James Howard, MD, MSc, FRCSC

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Title: Is there a role for pre-operative iron supplementation in patients preparing for a total hip or total knee arthroplasty?

Abstract

Background Several treatment modalities exist for the treatment of peri-operative anemia. We determined the effect of oral iron supplementation on pre-operative anemia, and the use of blood-conserving interventions prior to total hip (THA) and total knee arthroplasty (TKA).

Methods A total of 3,435 total joint replacements (1,461 THAs and 1,974 TKAs) were analyzed during two phases of a blood-conservation program. The first phase utilized erythropoietin alfa (EPO) or intravenous (IV) iron for patients at risk for peri-operative anemia. The second phase included these interventions, as well as pre-operative iron supplementation. The effect on pre-operative hemoglobin (Hb) and serum ferritin, as well as EPO and IV iron utilization, was determined.

Results Oral iron therapy increased pre-operative Hb by 6 g/L ($p<0.001$) and 7 g/L ($p<0.001$) in the hip and knee cohorts, respectively. Serum ferritin rose by 80 ug/L ($p<0.001$) and 52 ug/L ($p<0.001$) in the hip and knee cohorts, respectively. Patients with Hb < 130 g/L was significantly reduced ($p<0.001$ for both cohorts), as were patients with serum ferritin levels <35 ug/L ($p=0.002$ for hip and $p<0.001$ for knee cohorts). Utilization of EPO reduced from 16 to 6% ($p<0.001$) and 18 to 6%