

Are Intra-Articular Corticosteroid Injections Safe Prior to Hip Arthroplasty?

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INTRODUCTION: Corticosteroid injections are an effective treatment modality to treat pain from hip osteoarthritis. However, with the definitive treatment being total hip arthroplasty (THA), it is important to understand how corticosteroid injections can impact surgical outcomes, especially with regard to revision surgery for both septic and aseptic causes.

METHODS: We reviewed all primary THA procedures for degenerative joint disease at our tertiary care institution from 2016 to 2017. Patients were split into two groups: the injection group received an ipsilateral hip intra-articular corticosteroid injection within one-year of their THA and the control group received a THA without an ipsilateral hip intra-articular corticosteroid injection. The groups were compared by bivariate analysis in their entirety and after a propensity match controlling for age, sex, body mass index, diabetes status, and smoking status.

RESULTS: We identified 521 patients who received an injection and 3,019 patients who did not. The two groups were different by age, sex, body mass index, and diabetes status. The injection cohort experienced a higher total revision (3.26% - 17 revisions; $p=0.027$) and infectious revision rates (1.54% - 8 revision; $p=0.020$) than the control (Total: 1.79% - 54 revision; Infectious: 0.60% - 18 revision). After a 3:1 propensity match, the groups were similar by baseline demographics and comorbidities. The injection cohort continued to have a higher total revision (3.26%; $p=0.045$) and infectious revision rates (1.54%; $p=0.034$) than the control group (Total: 1.79% - 28 revision; Infectious: 0.58% - 9 revision). Revisions for aseptic causes (i.e., fracture and component loosening) were similar between the matched groups (1.8% vs. 1.2%; $p=0.340$). Survival curves in **Figures 1 and 2** demonstrate decreased probability of survival in the injection group beyond one year after surgery (Unmatched: $p=0.031$; Matched: $p=0.058$).

DISCUSSION AND CONCLUSION: This study suggests that intraarticular corticosteroid injections prior to THA may be associated with higher infectious revision rates over 5-years after surgery, but do not impact aseptic revision rates. Surgeons should be cautious with recommending corticosteroid injections in surgical candidates.

Figure 1

Figure 2

