

# **GLP-1 Agonists in Total Hip Arthroplasty; Complications, Readmissions, and Patient Reported Outcomes**

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## **INTRODUCTION:**

Obesity and diabetes, while increasingly common among the general population, are critical and modifiable preoperative medical comorbidities that should be managed appropriately prior to elective Total Hip Arthroplasty (THA). GLP-1 agonists represent a novel treatment option for orthopaedic surgeons in addressing both weight loss and diabetic control in the pre-operative setting. As their popularity continues to increase, it is important to understand the implications, safety, and outcomes associated with GLP-1 agonist use among patients undergoing elective total joint arthroplasty.

## **METHODS:**

A retrospective matched cohort analysis was conducted on all Total Hip Arthroplasty performed at a high-volume orthopaedic hospital between June 2016 and December 2022. A total of 66 patients taking GLP-1 agonists were identified and matched in a 1:2 ratio by age, gender, and BMI. Length of stay, inpatient complications, ED visits, readmissions, and HOOS JR outcome scores were compared between the two groups using Chi-squared tests and student's t test.

## **RESULTS:**

The GLP-1 cohort experienced a significantly higher rate of inpatient post-operative nausea and vomiting (18.2 vs 6.0%,  $p=0.011$ ). Although more patients taking GLP-1 agonists returned to the ED for nausea and vomiting among the GLP-1 cohort, no significant differences in ED volume were found between the two groups. Furthermore, no differences were reported in race, ethnicity, laterality, length of stay, or readmissions between the two cohorts.

## **DISCUSSION AND CONCLUSION:**

Despite the elevated risk of early post-operative nausea and vomiting among THA patients taking GLP-1 agonists, their use was not associated with any significant differences in length of stay, readmission rates or other complications including urinary retention, and venous thromboembolism. Future studies should assess the appropriate window to stop GLP-1 agonists preoperatively as well as to investigate complications and outcomes associated with the different drugs and their dosages.