No Difference in In-Hospital or 90-Day Opioid Patterns for the Direct Anterior Versus Posterolateral Approach in Primary Total Hip Arthroplasty

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INTRODUCTION: Proponents of the direct anterior approach (DAA) for total hip arthroplasty (THA) claim lower postoperative pain compared to the posterolateral approach (PLA). Whether that theoretical advantage results in lower opioid consumption is unclear. We sought to investigate the relationship between DAA and PLA on in-hospital opioid consumption and 90-day opioid prescribing patterns.

METHODS: Retrospective review identified 2,304 DAA and 6,288 PLA primary THAs in patients >18 years old from February 2019 to April 2022. The mean age was similar (64.8 versus 64.4 years, p=0.126). The PLA cohort had a higher mean ASA score (2.1 versus 2.0, p<.001) and a higher mean BMI (29.1 versus 26.5, p<.001). Those undergoing DAA had a longer mean operative time (93 versus 86 minutes, p<.001) and increased utilization of intraoperative periarticular injection (92% versus 67%, p<0.001) while utilization of peripheral anesthesia (98% versus 98%) and tranexamic acid (100% versus 100%) were similar. The DAA cohort had a shorter mean length of stay (1.22 versus 1.76 days, p<.001). Inhospital opioids consumed, and 90-day opioid prescribing patterns were compared in milligram morphine equivalents (MMEs). Quantile regression predicted the median (50th percentile) MME prescribed by approach.

RESULTS: After adjusting for patient and surgical factors, quantile regression predicted similar median MMEs for DAA versus PLA for inpatient (45.7 versus 44.3, p=0.15), outpatient (187.1 versus 186.6, p=0.72), and total (inpatient + outpatient) 90-day MMEs (243.5 versus 242.7, p=0.78). While approach did not demonstrate a significant relationship for predicted MMEs, other factors including age, sex, BMI, length of stay, peripheral anesthesia, periarticular injection, and White or Caucasian race demonstrated a significant relationship with predicted MMEs (p<.0001).

DISCUSSION AND CONCLUSION: While we identified several risk factors for increased in-hospital opioid consumption and 90-day opioid prescribing patterns, a comparison between DAA and PLA did not demonstrate a significant difference.