Effects of Surgeon Volume on Outcomes Following THA in the Morbidly Obese: An Analysis from the AJRR

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INTRODUCTION:
The purpose of this study was to utilize the American Joint Replacement Registry (AJRR) to examine the effects of surgeon total hip arthroplasty (THA) volume and obesity-specific THA volume on rates of revision following primary THA in patients with morbid obesity.
METHODS: We identified 550,934 primary THA performed from 2017 – 2021, by 3,934 surgeons in the AJRR. Annual surgeon THA volumes and obesity-specific THA volumes were calculated based on the median annual number of primary THA performed per surgeon for all patients and for patients with morbid obesity, respectively. Multivariate logistic regression was used to evaluate the effects of surgeon volume and obesity-specific volume on risk of all-cause revision and revision for periprosthetic joint infection (PJI).
RESULTS: Median surgeon THA volume was 75 cases/year (range, 1 to 695 cases/year) and median surgeon obesity-specific THA volume was 6 cases/year (range, 1 to 151 cases/year). Increasing surgeon THA volume was associated with a decreased risk of any revision within 90-days (OR 0.98, $p<0.001$) and decreased risk of revision for PJI (OR 0.98, $p=0.04$) for patients with morbid obesity. There were no associations between surgeon obesity-specific THA volume and risk of any revision or revision for PJI following THA in patients with morbid obesity ($p>0.05$ for all).
DISCUSSION AND CONCLUSION: Morbidly obese patients had a lower risk of any revision and PJI when a higher volume surgeon performed the primary THA. However, a surgeon's annual volume of THA performed in morbidly obese patients was not associated with risk of revision or PJI in this patient population. Surgeon overall THA volume may be more influential than obesity-specific THA volume in outcomes of primary THA in patients with morbid obesity.