

Outpatient Joint Arthroplasty—Patient Selection: Update on the Outpatient Arthroplasty Risk Assessment Score

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Abstract

Background

The Outpatient Arthroplasty Risk Assessment (OARA) score was designed to identify patients medically appropriate for same- and next-day discharge after surgery. The purpose of this study was to update and confirm the greater predictive utility of the OARA score in relation to American Society of Anesthesiologists Physical Status (ASA-PS) classification for same-day discharge and to identify the optimal preoperative OARA score for safe patient selection for outpatient surgery.

Methods

The perioperative medical records of 2051 primary total joint arthroplasties performed by a single surgeon at an academic tertiary care hospital were retrospectively reviewed. Six statistical measures were calculated to examine OARA score performance in binary classification of successful same-day discharge and preoperative OARA scores equal to 0 to 59 points (yes vs no) vs 0 to 79 points (yes vs no).

Results

Mean OARA scores increased more sharply in magnitude with increasing length of stay, providing superior discrimination than the ASA-PS classification with respect to same-day discharge. Preoperative OARA scores up to 79 points approached the desired 100% for positive predictive value (98.8%) and specificity (99.3%) and 0% for false positive rates (0.7%).

Conclusion

The OARA score was designed to err in the direction of medical safety, and OARA scores between 0 and 79 are conservatively highly effective for identifying patients who can safely elect to undergo outpatient total joint arthroplasty. The ASA-PS classification does not provide sufficient discrimination for safely selecting patients for outpatient arthroplasty.