Post-operative Outcomes for Reverse Total Shoulder Arthroplasty: Above and Under 65 Years of Age

Mitchell T. Tingey, BS; Mark A. Glover, BS; Evan M. Miller, MD;

Nicholas A. Trasolini, MD; Benjamin R. Graves, MD; Brian R. Waterman, MD

Wake Forest University School of Medicine Department of Orthopaedic Surgery

ePoster #103

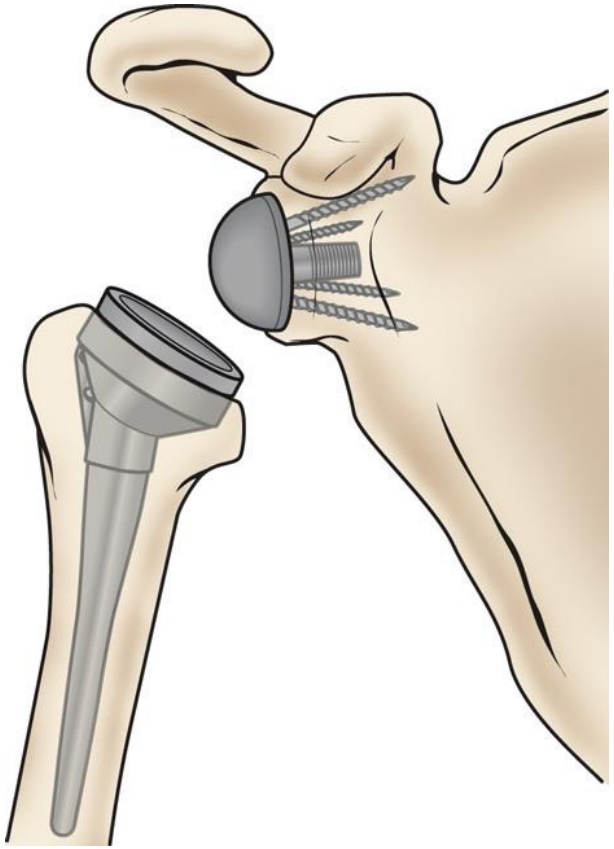
AANA23 ANNUAL MEETING NEW ORLEANS MAY 4-6, 2023

Disclosures

- Mitchell T. Tingey, BS: Nothing to Disclose
- Mark A. Glover, BS: Nothing to Disclose
- Evan M. Miller, MD: Nothing to Disclose
- Nicholas A. Trasolini, MD:
  - DJ Orthopaedics: Paid presenter or speaker
- Benjamin R. Graves, MD:
  - Arthrex, Inc: Other financial or material support
  - Biomet: Other financial or material support
  - Exactech, Inc: Other financial or material support
- Brian R. Waterman, MD
  - AAOS: Board or committee member
  - American Orthopaedic Society for Sports Medicine: Board or committee member
- Brian R. Waterman, MD (continued)
  - Arthrex, Inc: Research support
  - Arthroscopy: Editorial or governing board; Publishing royalties, financial or material support
  - Arthroscopy Association of North America: Board or committee member
  - Elsevier: Publishing royalties, financial or material support
  - FH Ortho: Paid consultant
  - Kaliber AI: Stock or stock Options; Unpaid consultant
  - Sparta Science: Unpaid consultant
  - Vericel: Paid presenter or speaker
  - Vivorte: Stock or stock Options

Objective

- Increased utilization of reverse total shoulder arthroplasties (RTSA) for both cuff tear arthropathy, fracture, & off-label indications
- Worse reported outcomes among patients <60 years of age[1], whereas others reported RTSA as a viable and reproducible option for this cohort
- Objective: to compare RTSA outcomes in patients ≤65 to those >65 years of age



AAOS OrthoInfo *Reverse Total Shoulder Arthroplasty*

[1]*Sershon, JSES, 2013*

Methods

- Retrospective case series
- Postoperative reverse total shoulder arthroplasties patients
- Group 1: aged 51-65 (n=12)
- Group 2: aged 66-80 (n=35)
- Primary outcomes: postoperative instability and/or surgical revision
- Secondary endpoints: Patient Reported Outcomes (PROs) for pain and function assessed at one year follow up
- Data analysis was completed via a non-parametric Mann-Whitney-U test; significance was defined as an alpha level of < 0.05

	≤65	>65
Average age (years)	60	72
Sex (%)		
Male	58%	54%
Female	42%	46%
Surgical Indication (%)		
Cuff tear arthropathy	92%	86%
Arthritis	8%	11%
Other	0%	3%
Laterality (%)		
Right	58%	54%
Left	42%	46%
BMI average (kg/m²)	31	31
ASA (%)		
2	25%	40%
3	67%	57%
4	8%	3%

Results

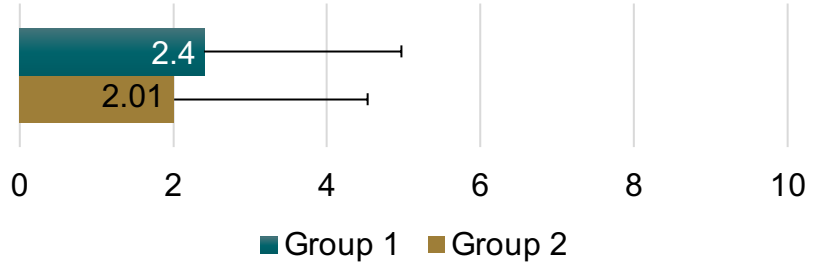
≤65 years old

>65 years old

Patient Reported Outcomes at one-year post op

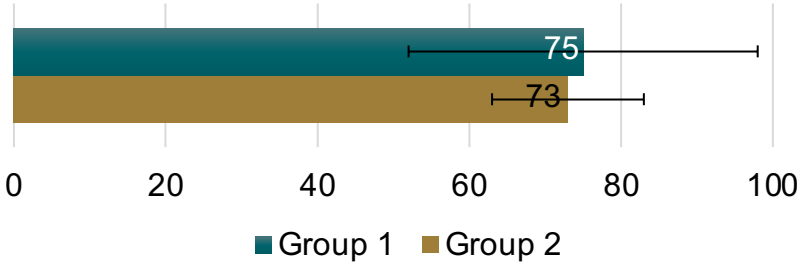
VAS Score

p=0.77



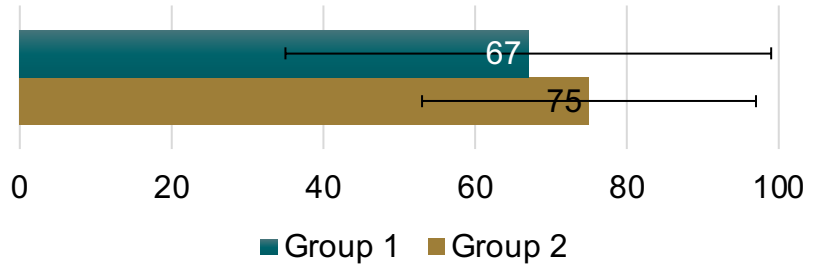
SANE Score

p=0.57



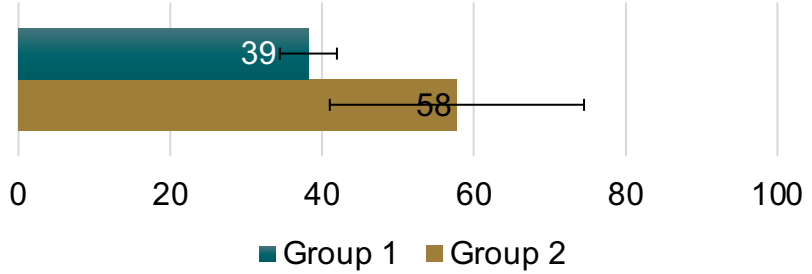
ASES Score

p=0.66



PROMIS-10 Physical Score

***p=0.009**

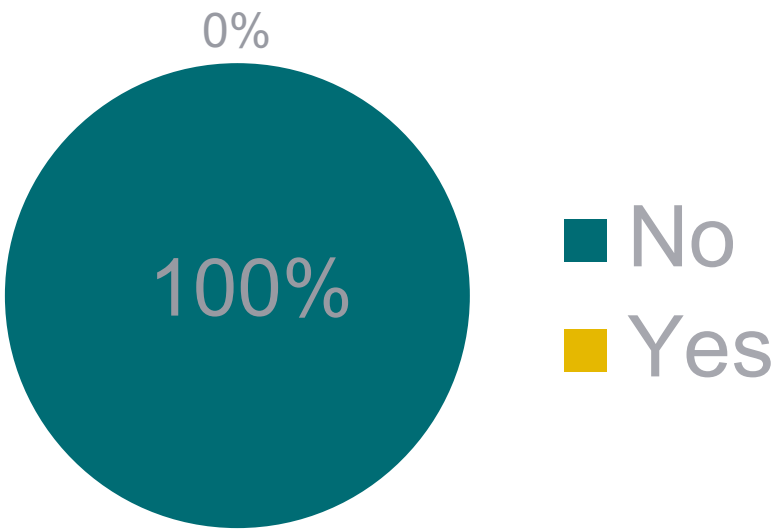


Results

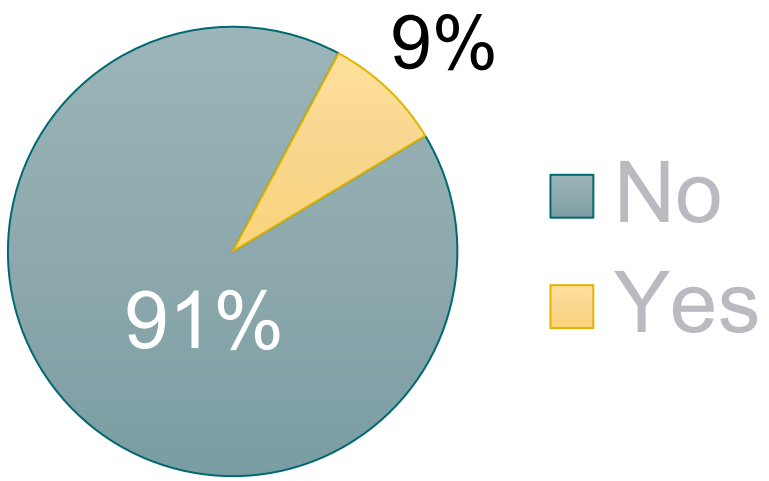
Revisions

Within two years of original arthroplasty

≤65 years old



>65 years old

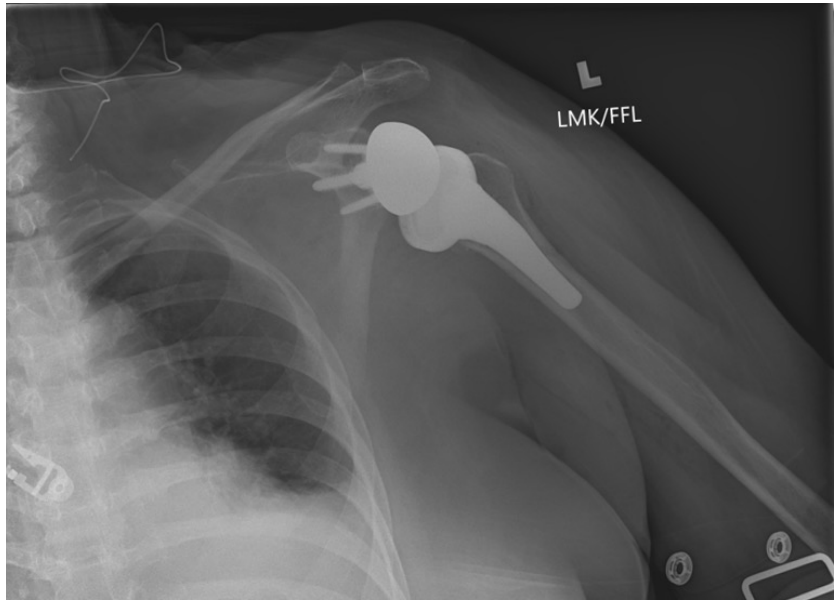


Results

- No statistically significant differences in VAS, SANE, and ASES Scores between the two groups at one-year post-op
- PROMIS-10 Scores showed significantly reduced function for ≤65-year-old group (p=0.009)
- 9% of the >65 group underwent revisions within two years of original arthroplasty while 0% of the ≤65 group underwent revisions

Conclusions

- Overall, these data challenge previous research reporting that younger patients undergoing reverse total shoulder arthroplasty have worse outcomes than those older than 65 years of age.



Take Away

- Younger patients reported lower PROMIS-10 scores, indicating ↓ overall perceived health & quality of life with comparable pain relief, satisfaction, and ↓ rate of surgical revision
- Reverse total shoulder arthroplasty may be a reasonable surgical option for patients < 65 years old
- Larger sample size & long-term follow-up will provide more comprehensive data to further characterize longitudinal outcomes in younger patients at mid- to long-term outcomes

Thank You