



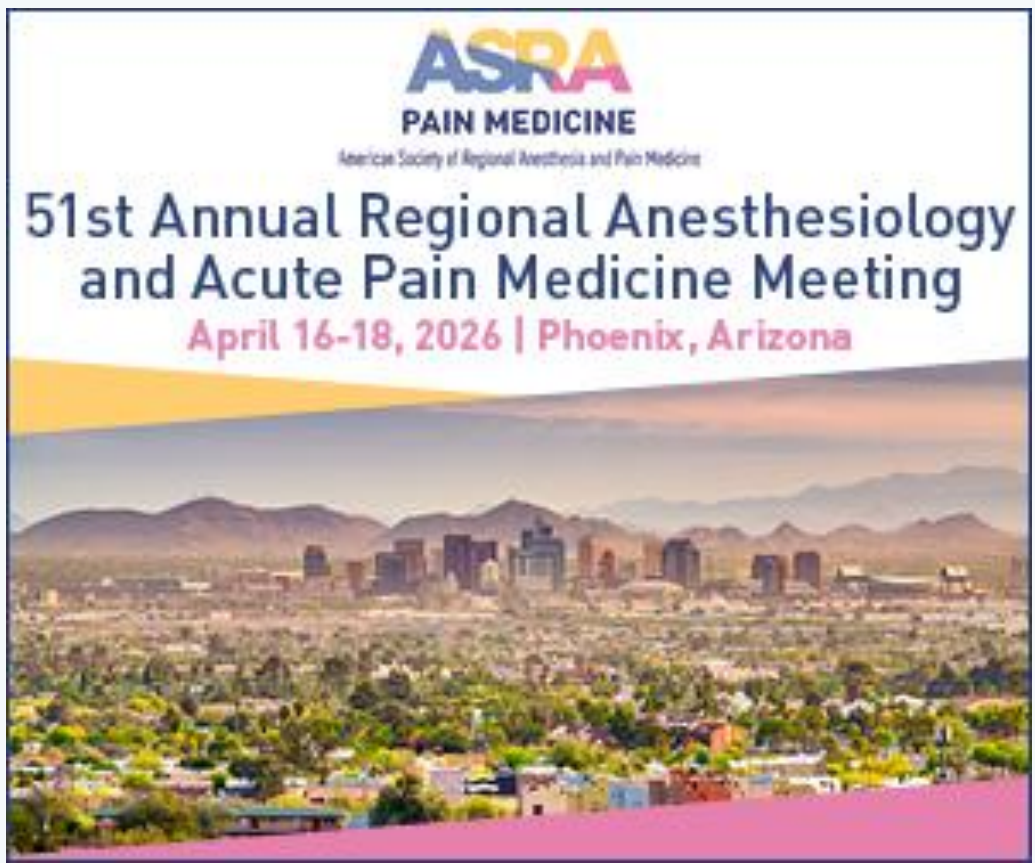
Incidence of Complex Regional Pain Syndrome Following Various Upper and Lower Extremity Orthopaedic Procedures

Sharon Toor^{1,3}, Charles T Williams², Alex Illescas, MPH³, Tina Chen³, William Chan³, Anuj Malhotra, MD^{3,4}, Semih Gungor, MD^{3,4}, Jashvant Poeran, MD, PhD³, Stavros Memtsoudis, MD, PhD, MBA^{3,4}, Alexandra Sideris, PhD^{3,4}, Daniel Richman, MD^{3,4}

¹University of Central Florida College of Medicine, Orlando, FL, USA; ²New Jersey Medical School, Newark, NJ, USA; ³Pain Prevention Research Center, Department of Anesthesiology, Critical Care & Pain Management, Hospital for Special Surgery, New York, NY, USA; ⁴Department of Anesthesia, Weill Cornell Medicine, New York, NY, USA



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INTRODUCTION

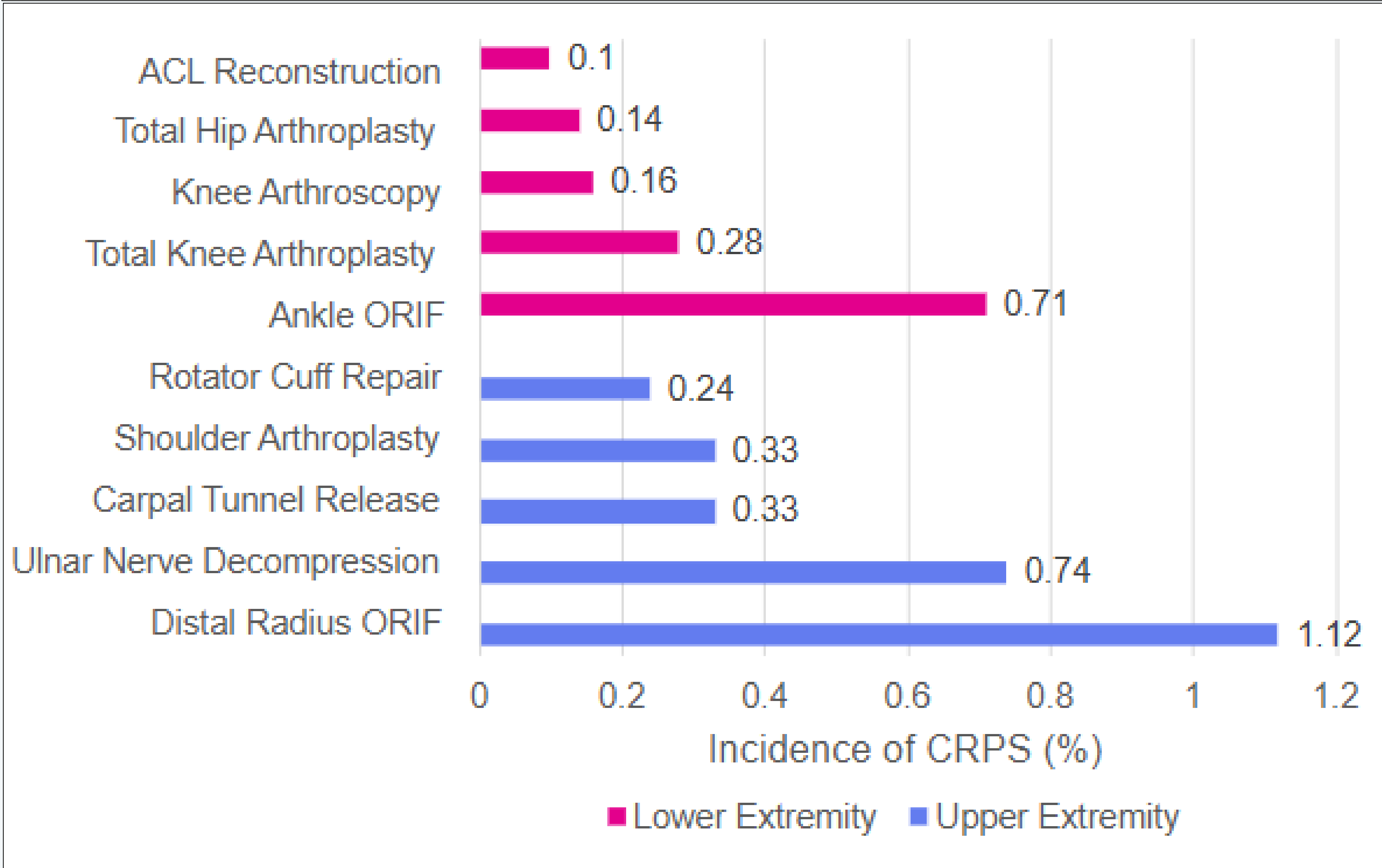
- Complex Regional Pain Syndrome (CRPS) is characterized by severe, debilitating, long-lasting neuropathic pain, often triggered by surgery.
 - Presents with unexplained sensory or motor changes.^{1,2}
- Procedures associated with CRPS onset remain unclear.
- Higher rates are reported after upper extremity surgery.³**
- Distal radius open reduction-internal fixation (ORIF) shows reported incidence of 0.6-7%.⁴
- Despite low frequency, CRPS carries significant morbidity.

METHODS

- We performed a retrospective analysis using 2017-2022 MarketScan data (IRB#2017-0169).
- Common upper and lower extremity orthopedic procedures were included.
- Continuous one-year pre- and postoperative enrollment was required.
- Patients with prior CRPS within one year were excluded.
- Postoperative CRPS was identified using ICD-10 codes G90.5x, G56.4x, and G57.7x.
- Common procedures were defined based on prior literature.

Main findings & tables/figures

Figure 1. Incidence of CRPS by Procedure



RESULTS

- Distal radius ORIF had the highest upper extremity CRPS incidence (1.12%).**
 - Ulnar nerve decompression incidence was 0.74%.
 - Carpal tunnel release and shoulder arthroplasty incidence was 0.33%.
 - Rotator cuff repair had the lowest upper extremity incidence (0.24%).
- Ankle ORIF had the highest lower extremity incidence (0.71%).**
 - Total knee arthroplasty incidence was 0.28%.
 - Knee arthroscopy and total hip arthroplasty incidence was 0.16% and 0.14%.
 - ACL reconstruction had the lowest overall incidence (0.10%).

DISCUSSION

- CRPS incidence varies by procedure and anatomical site.
- Higher rates were observed after upper extremity surgery.**
- Distal radius and ankle ORIF showed the highest incidence.
- Arthroplasty, arthroscopy, and ligament procedures had lower rates.
- Claims data and ICD-10 coding may **underestimate** true incidence.
- Findings support targeted counseling and closer after ORIF.

References →

