

## INTRODUCTION

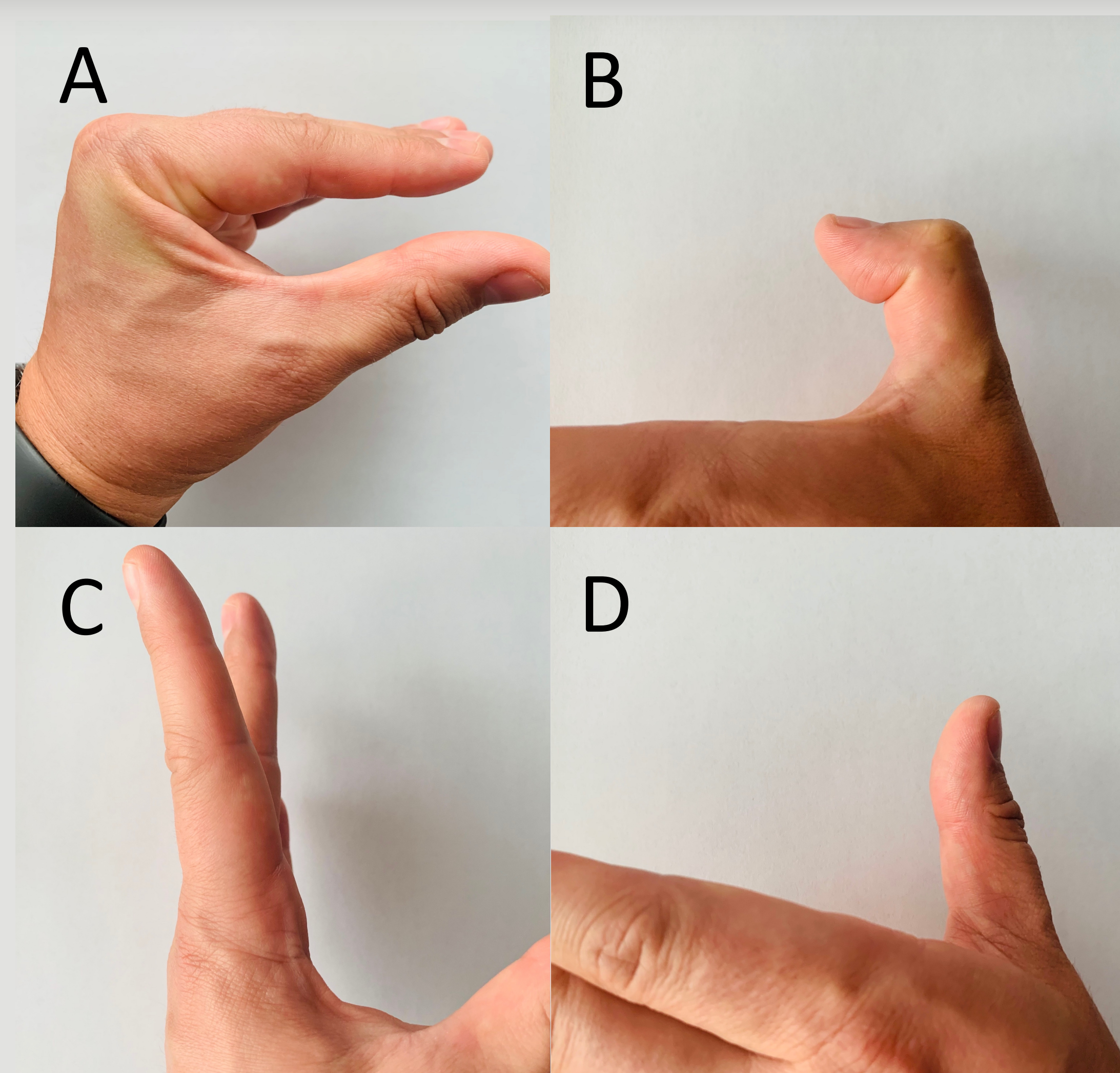
- Spontaneous Extensor Pollicis Longus (EPL) tendon rupture following nonoperative and operative treatment of distal radius fractures (DRF) is well described
- Extensor indicis proprius (EIP) to EPL transfer is an accepted but relatively rare treatment for EPL rupture to restore important hand function
- Outcomes after EIP to EPL transfer are not well defined

**The purpose of this study is to evaluate mid-term functional, patient satisfaction, and strength and motion outcomes of EIP to EPL transfer for traumatic EPL rupture after DRF**

## MATERIALS & METHODS

- Retrospective review of electronic medical records for patients sustaining DRF then undergoing EIP to EPL tendon transfer (CPT 253310) from 2000-2015 at high-volume single private practice center
- Data extraction included patient demographics and initial fracture management and timing of transfer surgery
- Follow up assessment was performed via virtual telemedicine due to ongoing COVID-19 pandemic
- Outcome measures including index finger metacarpophalangeal joint (IF MCP) and thumb interphalangeal (IP) joint range of motion (ROM), digital extension against resistance, subjective hand function, and QuickDASH scores were recorded

## FIGURE 1



Representation of telemedicine ROM exam with A) IF MCP Flexion B) Thumb IP Flexion C) IF MCP Extension D) Thumb IP Extension

## RESULTS

- **9 patients included in case series**
- 27 eligible patients initially: 3 deceased, 2 refused participation, 13 could not be reached. 7/9 included patients were available for virtual physical examination
- Demographics: 8/9 female, mean age 54 +/- 13 years, 7/9 right hand dominant, 6/9 involved left hand
- Time to rupture ranged from immediate to 3.5 months, time to surgery ranged from 4 days to 3.5 months
- All 7/7 (100%) had independent IF MCP extension, 6/7 (86%) had IF MCP and thumb IP extension against resistance
- Mean IF MCP extension was 1 +/- 2°, mean IF MCP flexion was 89 +/- 2°, mean thumb IP extension was -5 +/- 4°, and mean thumb IP flexion was 67 +/- 15°
- Mean QuickDASH Score was 16 +/- 14

## DISCUSSION

- Results show good mid-term outcomes in patients who underwent EIP to EPL tendon transfer after DRF at our institution
- Independent thumb and IF function and resistance was very high and ROM also within physiologic range
- QuickDASH scores were very good and comparable to 1-year outcomes shown in other studies
- Primary limitation is sample size, although this study represents one of largest case series to date and is consistent with size of other prior published case series
- Secondary limitation is limitations of virtual telemedicine examination, although finger range of motion virtual measurement techniques have been validated in the literature

## REFERENCES

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