Paper Session: Program Highlights

**The Wrist and Radius Injury Surgical Trial (WRIST): 24-Month Outcomes From a 24-Center North American Clinical Trial**

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**Purpose:** We compared 24-month patient-reported outcomes after surgical treatment or casting in patients ≥60 years of age with unstable distal radius fractures (DRFs).

**Methods:** The WRIST trial is the largest randomized multicenter trial in hand surgery, which enrolled 304 adults with isolated, unstable DRFs at 24 institutions. WRIST participants were followed for 24 months, the longest follow-up among prospective studies comparing 4 treatment methods. Patients who agreed to surgical treatment (187) were randomized to internal fixation with volar plate (VLPS), external fixation (ex fix), or percutaneous pinning; patients who preferred conservative management (117) received casting. The primary outcome was 24-month Michigan Hand Outcomes Questionnaire (MHQ) Summary score. Secondary outcomes were MHQ domain scores.

**Results:** At 24 months, participants' mean MHQ Summary score was 86 (95% CI: 83, 88), representing good hand function. Participants reported good return of their Activities of Daily Living (ADLs) with a mean MHQ ADL score of 88 (95% confidence interval [CI]: 80, 88). There were no significant differences in score by treatment group in any MHQ domains at 24 months. Six weeks after surgery, VLPS participants scored significantly higher than the other 3 groups on ADLs and Satisfaction (both $P < 0.0001$), whereas participants who received ex fix scored significantly lower than the casting and VLPS groups on the same domains. By 3 months, the gap between VLPS and casting had disappeared but ex fix participants continued to report significantly worse scores. Ex fix participants did not report ADL scores comparable to the other groups until 12 months after surgery.

**Conclusion:** Participants reported good outcomes 24 months after DRF regardless of treatment. Casting and VLPS are both acceptable treatments for older adults. The decision between the 2 treatments should be made considering patient goals regarding recovery speed and desire to avoid surgical risks. Ex fix should be avoided because of worse outcomes in the year after surgery and the risk of pin site infections.