

Dr. David J. Stockton and Dr. Wei Ting (Alice) Wang

“Prednisone for the prevention of complex regional pain syndrome in high-risk patients after distal radius fracture – a pilot study”

Distal radius fractures are the most prevalent adult fracture, accounting for 17.5% of all fractures. Complex regional pain syndrome (CRPS) is a common complication that can occur and can affect up to a third of patients who sustain a wrist fracture. CRPS can lead to permanent disability and is costly to the patient and to the healthcare system, with an estimated cumulative cost of over \$42,000 over 8 years for outpatient visits and pain prescriptions. In addition, amidst the opioid epidemic, the risk of increased opioid use in patients with CRPS prompts the need to find viable preventative strategies. While there have been various proposed prevention and treatment options, there is insufficient research evidence to confirm their effectiveness. Several small studies have shown potential benefits of glucocorticoids such as prednisone for the treatment and prevention of CRPS. However, none of the studies are randomized in design. Our pilot randomized control study aims to evaluate a short course of oral prednisone for prevention of CRPS in high-risk patients treated with surgery for distal radius fractures. Patient will be randomized to receive a 3-week tapering course of oral prednisone or placebo pills and will be followed up for 6 months. Our goals are to examine the feasibility of conducting a randomized trial and to assess the incidence of CRPS, post-operative opioid use, and any adverse events. Results from our study will guide the design of a definitive randomized trial. This research will provide new information for orthopaedic surgeons and healthcare providers to optimize safe and effective management of distal radius fractures which will improve the quality of life of patients who sustain this common fracture.