

**Dr. Andrea Chan and Dr. Ryan Paul**

*"The Effect of Topical TRanexamic Acid vs. placebo on Acute Postoperative Pain following Distal Radius Fracture Fixation: A Randomized Controlled Trial - The TRADR Study"*

The TRADR study is a randomized controlled trial to assess the effect of topical Tranexamic acid administration on acute post operative pain in patients undergoing surgical repair of distal radius fractures. This is a common orthopaedic operation associated with good long term functional outcomes, but it is also associated with significant pain afterwards. This surgery may also lead to increased need for pain-relieving medications, particularly opioids like oxycodone, leading to higher healthcare expenses. Opioids can help with post-surgery pain, but they also come with serious problems like addiction or overdose. Healthcare providers are always looking to find ways to use fewer opioids while still making sure pain is taken care of after surgery. This is where topical tranexamic acid may play a role. Tranexamic acid is approved in Canada for other uses in the treatment and prevention of surgical bleeding and swelling. Tranexamic acid has been shown to reduce pain after surgeries like spine and shoulder procedures. For these reasons, tranexamic acid seems like a good option to help with pain after wrist surgery. It might reduce the need for strong painkillers and prevent extra visits to the doctor, saving time and money.

For this study, both patients and surgeons / investigators will not know which patients receive topical tranexamic acid and which receive a placebo of saline during the surgery. A standardized postoperative pain protocol will be provided. From there we will track the patient's pain scores, pain killer and opioid use, adverse events, and other secondary outcomes. Patients will fill out a daily diary, receive a postoperative telephone call, and be followed at two and six weeks postoperatively. We will use this information to demonstrate whether or not the application of topical tranexamic acid is a useful way to reduce early postoperative pain after distal radius fracture surgery.