

## **A New Diagnostic Test for Identifying Tendon Subluxation as a Cause of Failed de Quervain Tenosynovitis Surgical Release.**

Ramy Ahmed Soiman<sup>1</sup>, Ahmed Nageeb Mahmoud, L Christopher Grandizio, Joel Christian Klena, Daniel Scott Horwitz, Mostafa Aly Elabd

<sup>1</sup>Orthopedics

**INTRODUCTION:** Failed de Quervain release, defined as persistent postoperative pain, can occur secondary to several causes such as infection, nerve injury, insufficient release or overzealous release leading to tendon instability. In this study, we propose a new diagnostic test for verifying tendon subluxation as the cause of failed de Quervain tendon release surgery.

**METHODS:** After IRB approval, four patients had a failed de Quervain surgery secondary to tendon subluxation were included. The test consists of simple wrist flexion and thumb abduction, followed by alternating wrist flexion/extension movements. A positive test shows patient apprehension and obvious volar subluxation of the first compartment tendons, which resolves upon repeating the test while maintaining a direct pressure over the radio-volar aspect of the radial styloid (Video 1).

**RESULTS:** The test showed positive findings in all four cases. After revision surgery, all the cases had a negative test (Video 2). Surgical reconstruction was performed with augmentation using the brachioradialis sheath. The test was repeated by 3 surgeons, who all confirmed its phases (positive findings that resolves after pressing against the radio-volar aspect of the radial styloid), and results.

**DISCUSSION AND CONCLUSION:** The new test sounds a good diagnostic test for confirming tendon laxity as a cause of failed de Quervain release surgery secondary excessive release. The test seems reproducible, easy, with good surgeon's agreement.

