Hypothesis: Traditional Fowler tenotomies via open technique, or needle can lead to scarring against the underlying periosteum. Use of collagenase clostridium histolyticum (XIAFLEX®) for DIP joint tenotomy may lead to less scarring, and improved results versus traditional open tenotomy.

Methods: Four patients with hyperextended DIP joints were treated with one or two injections of 0.1 mg of XIAFLEX® (Collagenase) reconstituted in 0.45 cc of diluent at one time. Manipulation of the DIP joint under local anesthetic was performed to release the contracted extensor tendon. Average DIP hyperextension was 31 degrees with ROM of 32 degrees. Average follow-up was 4 months.

Results: DIP hyperextension improved from 31 degrees to 1 degree. ROM was maintained at 31 degrees. One patient had a dorsal skin tear which was sutured. All patients could flex/extend the DIP.

Summary: Chemical Fowler tenotomies with collagenase can treat Dupuytren contracture with a hyperextended DIP joint. Hyperextension diminished and flexion remained the same. This off-label use of collagenase allows hand surgeons a new to perform tenotomies.

Patient One: Dilution 0.45 cc in 0.9 mg XIAFLEX® (X is 0.1 mg XIAFLEX® dose)
PRE OP before first XIAFLEX® 7/22/13
MCP 0-90 PIP -70-90 DIP +30-15 TAM 155 degrees and hyperextended DIP with boutonniere and poor flexion DIP

At Pre-op Second XIAFLEX® 9/24/13 Below
MCP 0-100 PIP -40-90 DIP +10-65 TAM 205 and much improved DIP flexion

4 Month Follow-up 11/20/13 MCP 0-100 PIP -30-100 DIP +10-45 TAM 225

Patient Two: Dilution 0.45 cc in 0.9 mg XIAFLEX® (X is 0.1 mg XIAFLEX® dose)
Previous failed: #1 fasciectomy, #2 Digit WidgetTM surgery with #3 fasciectomy. Now Pre Op XIAFLEX® 9/27/12 0.1mg increments along ulnar cord and 0.1mg into DIP extensor tendon
MCP 0-85 PIP -60-100 +20-30 TAM 175 with hyperextended boutonniere

At Manipulation After XIAFLEX® 10/11/12 Below
MCP 0-85 PIP -35-100 DIP 0-40 TAM 185 at 5 month Follow-up with good flexion DIP