Outcome of Dupuytren's Contractures after Collagenase Clostridium Histolyticum Injection: A Single Institution Experience

Yin Kan Hwee, MD; Marisa Vinas, BS; Christopher Litts, MD; David Friedman, MD, FACS

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Background: Collagenase clostridium histolyticum (CCH) injection is an alternative to surgery for patients with Dupuytren's disease (DD) contractures of the metacarpophalangeal (MCP) and proximal interphalangeal (PIP) joints. The success of surgical treatment modalities for DD is reported to vary widely from about 20-80%[1]. This study presents the outcome of patients with DD contractures treated with CCH injections.

Methods: A retrospective study was conducted of patients with DD contractures of the hand treated with CCH injections in a single institution since its FDA approval from February 2010 to April 2014. All patients received the recommended dose of 0.58mg of CCH reconstituted per manufacturer guidelines and returned one day after injection for joint manipulation under local nerve blocks. Data for follow up at 7 and 30 days post-op and up to 4 years for patients who return seeking further therapy for recurrent symptoms were reviewed.

Results: One-hundred and thirteen patients with a total of 146 joint contractures (72 MCP; 74 PIP) were treated with CCH injections from February 2010 to April 2014 (94 males; 18 females; age 40-92). Successful CCH therapy was observed in 75% of injections (109/146 joints; 59 MCP; 50 PIP), as defined by <5 degrees of contracture 30 days post-treatment. Twenty-three percent of treated contractures had partial correction (34/146 joints; 13 MCP; 21 PIP), as defined by improvement from pre-treatment contracture but still with >5 degrees of residual contracture 30 days post-treatment (Table 1). Fifteen patients returned to the clinic seeking additional therapy for recurrent joint contracture symptoms for 17 joints (17/109, 15.6%; 5 MCP; 12 PIP) over a span of 2 months to 4 years. Eleven joint contractures (10%) recurred within one year, 2 joint contractures (1.8%) recurred in the second year, 1 joint contracture (0.9%) recurred in the third year, and 3 joint contractures (2.8%) recurred in the fourth year. Recurrence was defined as a return of >20 degrees contraction in the setting of a palpable cord after initial successful treatment.

Conclusions: Our five-year experience of CCH injections for DD contractures of the hand revealed full correction in 75% and partial correction in 23% of treated joints. The recurrence rate of contracture was 15.6% which represented patients who returned to the clinic for evaluation of recurrent contractures after initial successful treatment. These results are comparable to current surgical treatment modalities as well as previously published multi-

institutional CCH treatment studies[2,3]. The use of CCH injections is an important non-surgical treatment alternative for DD contractures of the MCP and PIP joints.

References:

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Table 1. Results of collagenase clostridium histolyticum injections of MCP and PIP contractures at 30 days post-op evaluation, total joints treated N=146.

	Treated Joints	MCP	PIP
Success	109 (75%)	59 (54%)	50 (46%)
Partial Success	34 (23%)	13 (38%)	21 (62%)
Failure	3 (2%)	0	3 (100%)