Prospective Randomized Controlled Trial Comparing 1 Day Versus 7 Day Manipulation Following Collagenase Injection for the Treatment of Dupuytren's Contracture

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ABSTRACT

Background:
Collagenase clostridium histolyticum (CCH) injection followed by manipulation at 24 hours has become a common treatment option for Dupuytren contracture. We hypothesize that manual manipulation at day 7 following injection has similar efficacy, tolerance and safety.

Methods:
Eligible patients were randomized to manipulation at day 1 versus day 7 following CCH injection. Pre-injection, pre-manipulation, post-manipulation, and 30 day follow-up metacarpophalangeal (MCP) and proximal interphalangeal (PIP) joint contractures were measured. Pain scores were recorded at each time point. Data was stratified per cohort based on primary joint treated (MCP versus PIP). Means were compared using paired and unpaired t-tests.

Results:
Forty-three patients with 46 digits were eligible and randomized to 1 day (22 digits) and 7 day manipulation (24 digits). For MCP joints, there were no significant differences in flexion contractures between 1 and 7 day cohorts for initial (47° vs. 46°), post-manipulation (0° vs. 2°), or 30 day follow-up (1° vs. 2°) measurements. Pre-manipulation, the residual contracture was significantly lower in the 7 day group (23° vs. 40°) (Figure 1). For PIP joints, there were no significant differences between 1 and 7 day cohorts for initial (63° vs. 62°), pre-manipulation (56° vs. 52°), post-manipulation (13° vs. 15°), or 30 day (14° vs. 16°) measurements (Figure 2). There were no significant differences in pain or skin tears between the two groups. No flexor tendon ruptures were observed.

Conclusion:
The effectiveness of CCH in achieving correction of Dupuytren contractures is preserved when manipulation is performed on day 7, with no differences in correction, pain, or skin tears. This data suggests that manipulation can be scheduled at the convenience of the patient and surgeon between day 1 and day 7 after injection.

References:
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