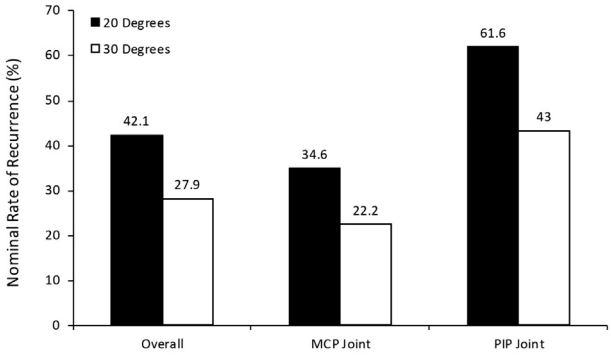

Figure 1: Nominal recurrence rates overall and by type of Dupuytren contracture joint.

Table 1: Intervention Types Chosen for Treatment of Worsening Contracture in Joints Originally Treated to Clinical Success (Reduction in Dupuytren Contracture to 0° to 5°), by Year

Intervention	Year 2, n (%)	Year 3, n (%)	Year 4, n (%)
Total	15 (100)	32 (100)	38 (100)
CCH	0	6 (18.8)	18 (47.4)
Fasciectomy	9 (60)	20 (62.5)	12 (31.6)
Needle aponeurotomy	3 (20)	4 (12.5)	5 (13.2)
Fasciotomy	0	1 (3.1)	1 (2.6)
Dermofasciectomy	0	1 (3.1)	0
Other	3 (20)	0	2 (5.3)

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PAPER 80

Clinical Paper Session 18: Dupuytren Disease
Saturday, October 5, 2013 • 4:10–4:16 PM
Category: Basic Science–Clinical Research
Keyword: Hand

Efficacy and Safety of Collagenase *Clostridium histolyticum* in the Treatment of Proximal Interphalangeal Joints in Dupuytren Contracture: Combined Analysis of 4 Phase 3 Clinical Trials

Level 4 Evidence

• **Marie A. Badalamente, PhD**
• Lawrence C. Hurst, MD
• Prosper Benhaim, MD
♦ Brian Cohen, PhD

Hypothesis: An analysis was undertaken to determine the efficacy and safety of collagenase *Clostridium histolyticum* (CCH) in the treatment of Dupuytren contracture (DC) of the proximal interphalangeal (PIP) joint.

Methods: This retrospective analysis examined DC of 644 PIP joints in 506 subjects enrolled in CORD I/II and JOINT I/II clinical trials,[1–3] to determine the percentage of subjects who achieved clinical success (0° to 5° extension), clinical improvement (≤ 50% of baseline contracture), and improvement in range of motion (ROM) at 30 days after the first injection and the last injection of CCH. Per protocol, a maximum of 3 injections/cord was allowed.

Results: A total of 1,165 CCH injections were administered to cords affecting 644 PIP joints. Clinical success and clinical improvement were shown in 27.0% (174 of 644) and 49.0% (316 of 644) of PIP joints after 1 injection, and in 33.8% (218 of 644) and 58.0% (374 of 644) after the last injection, respectively; 60% of PIP joints received 1 injection, 24% received 2 injections, 15% received 3 injections, and 1% received 4 injections. Mean change in ROM increased from 51.0° at baseline to 71.2° after the first injection, and to 75.4° after the last injection. Clinical success and clinical improvement were highest in the index finger compared with the other fingers (Table 1). Improvement in ROM was generally comparable among the fingers and slightly higher after the last injection. Clinical success and clinical improvement were markedly better in the subgroup with low (≤ 40°) baseline severity than high baseline severity after the first and last injection (Table 2). The most common adverse events included edema (58.3%), contusion (38.0%), injection site hemorrhage (23.0%), pain in extremity (22.4%), injection site pain (20.9%), and swelling (16.2%). Three flexor tendon ruptures of the little finger were reported. No further tendon ruptures occurred after changing the injection method.

Summary:

- Collagenase *Clostridium histolyticum* was effective for DC of PIP joints of both low and high baseline severity and by finger.
- Outcomes after CCH injection were better in the low baseline severity subgroup, which suggests that earlier intervention achieves better outcomes.
- Clinical success and clinical improvement were most improved in the index finger and least improved in the little finger after the first and last injections in subjects with high baseline severity.

Table 1: Efficacy Results by Finger After First and Last Injections

First Injection	Little	Ring	Middle	Index
Clinical success, % of joints	24.3	27.5	29.6	46.5
Clinical improvement, % of joints	44.7	53.8	51.9	67.4
Range of motion, change in degrees	20.3	20.9	19.4	19.7
Last injection				
Clinical success, % of joints	31.3	36.3	31.5	53.5
Clinical improvement, % of joints	55.0	60.0	59.3	69.8
Range of motion, change in degrees	25.2	23.8	23.7	21.8

Table 2: Efficacy Results by Baseline Severity of Contracture After First and Last Injections

	Little	Ring	Middle	Index
First injection				
Low baseline severity (≤ 40° contracture)				
Clinical success, % of joints	50.7	37.9	42.3	53.1
Clinical improvement, % of joints	68.1	58.6	61.5	68.8
Range of motion, change in degrees	17.9	17.7	16.6	18.2
High baseline severity (> 40° contracture)				
Clinical success, % of joints	9.6	15.1	17.9	27.3
Clinical improvement, % of joints	31.7	48.0	42.9	63.6
Range of motion, change in degrees	21.6	24.7	21.9	24.1
Last injection				
Low baseline severity (≤ 40° contracture)				
Clinical success, % of joints	55.8	46.0	46.2	56.3
Clinical improvement, % of joints	73.2	63.2	65.4	71.9
Range of motion, change in degrees	19.8	17.8	17.6	19.3
High baseline severity (> 40° contracture)				
Clinical success, % of joints	17.7	24.7	17.9	45.5
Clinical improvement, % of joints	45.0	56.2	53.6	63.6
Range of motion, change in degrees	28.2	31.1	29.2	28.7

♦ Speaker has nothing of financial value to disclose

- Adverse events in PIP joints were similar to those observed in metacarpophalangeal joints, and there was no evidence to support that the little finger PIP joints are more difficult to treat.

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PAPER 81

Clinical Paper Session 18: Dupuytren Disease
Saturday, October 5, 2013 • 4:20–4:26 PM
Category: Evaluation/Diagnosis/Clinical Treatment
Keyword: Hand

Open Fasciotomy: Still a Major Weapon in the Surgical Armamentarium Against Dupuytren Disease?

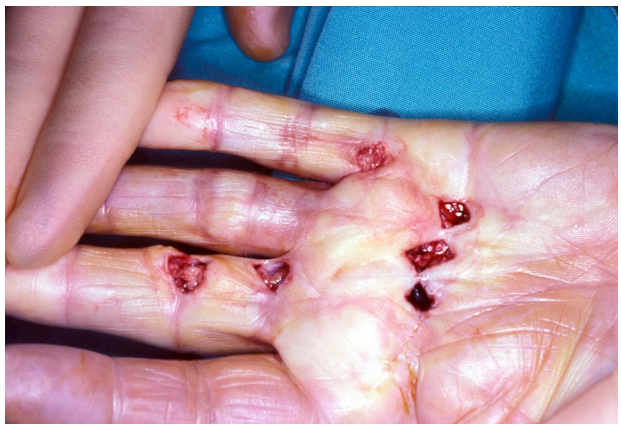
Level 4 Evidence

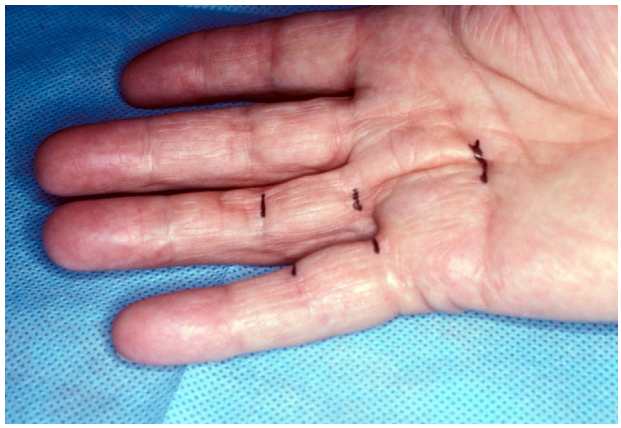
♦ **Camilla J. Stewart, MBChB**
♦ Issaq Ahmed
♦ Dominique Davidson
♦ Geoffrey Hooper, FRCS

Hypothesis: There is current interest in minimally invasive treatment of Dupuytren disease but little in effectiveness of treatment by open fasciotomy. We reviewed a series of 1,077 open fasciotomies performed by a single consultant to ascertain the reoperation rate and results of secondary surgery.

Methods: Theater coding data were used to identify a consecutive series of patients who underwent open fasciotomy as a primary procedure for Dupuytren disease over a 5-year study period. The initial fasciotomy was done using the same technique for all patients: under intravenous regional anesthesia with small transverse incisions made over the cords at 1 to 3 levels. These were allowed to heal by secondary intention for 2 to 3 weeks with free digital mobilization (Figs. 1, 2). Outcome measurements recorded for the initial open fasciotomy, included the completeness of intraoperative correction, occurrence of perioperative or postoperative complications, time to reoperation, and degree of digital contracture at reoperation. The details of the revision operations were noted, together with the degree of intraoperative correction. Follow-up ranged between 5 and 10 years, and statistical analysis was performed using SPSS software.

Results: A total of 1,077 consecutive patients were treated by open fasciotomies for Dupuytren disease between January 2000 and January 2005. Of these patients, 143 (13.5%) required operations for recurrent disease of the same hand. Data were obtainable for 97 cases, in which a total of 144 digits were reoperated. Complete intraoperative release was achieved in most digits (134 of 144; 93%), irrespective of the number of incisions required, with 1 documented postoperative complication. The mean time to reoperation was 46 months (SD, 22 mo; range, 8–98 mo). The mean prerevision total extension deficit (TED) for the 144 reoperated rays was 81° (SD, 39°; range, 30° to 180°), which was similar to the mean TED before the first procedure: 82° (SD, 38°; range, 30° to 180°). The severity of the recurrent TED was greatest in rays that had undergone 3-level fasciotomy (103°) and least in those that had undergone a single-level fasciotomy (78°). Complete intraoperative release was obtained in most cases for all types of revision procedure (140 of 144; 97%).





Summary:

- A low reoperation rate was identified, with good intraoperative correction achieved by initial open fasciotomy and secondary surgery.
- We believe that this refinement of the earlier method of percutaneous fasciotomy is a useful and safe technique in the surgical armamentarium for the treatment of Dupuytren disease.

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♦ Speaker has nothing of financial value to disclose