Collagenase Clostridium Histolyticum Outcomes in a Single Unit

INTRODUCTION

Dupuytren’s contracture is a common hand condition characterised by progressive fibrosis of the palmar fascia and functionally significant digital contracture over time. As well as surgical fasciectomy and needle fasciectomy, collagenase clostridium histolyticum (CCH) injection is a useful treatment modality1. CCH treatment involves an injection of collagenase into the pathological cord, followed by finger joint manipulation under local anaesthesia 24 or 48 hours later.

AIMS

To assess outcomes of CCH treatment for Dupuytren’s patients in our hand surgery unit. We planned to review objective measures of change in finger joint angulation as well as patient reported outcomes with regards to day to day hand function.

METHODS

Joint angulation was routinely measured (using a goniometer) at pre- injection, immediately post manipulation and again at six weeks post treatment in all CCH patients.

A validated Dupuytren’s specific hand function (“URAM”2) questionnaire was implemented pre treatment and again six weeks post treatment. A maximum score 45 implies severely impaired function, and a minimum of 0 implying completely unimpaired hand function. URAMs were either completed prospectively at each visit to the hand unit or retrospectively, whereby patients were asked to recall hand function prior to, and 6 weeks after CCH treatment because they had already undergone treatment before the start of this study.

A spreadsheet was derived and statistical analysis performed on both the URAM scores and the joint angulation results to compare pre- CCH figures with 6 weeks post CCH figures. The Student’s t test and sign test were used to assess significance.

RESULTS

76 patients were identified. URAM responses were received from 49 (64%) of the 76 patients. 19 out of 49 (39%) URAM questionnaires were completed retrospectively, whilst 30 out of 49 (61%) were completed prospectively. Retrospective URAMs were completed either by telephone call or email. Prospective URAMs were completed on hard copies in clinic.

Mean pre-treatment URAM score (out of a total of 45) was 20 (s.d. 10.7). Mean URAM score 6 weeks post treatment was 5 (s.d. 6.7). This difference was statistically significant (P<0.001) after analysis using the paired two-tailed Student’s T Test (Graph 1).

Mean overall pre treatment joint angle was 54 degrees. Mean joint angle six weeks post treatment was 11 degrees (Graph 2). This difference was statistically significant (P<0.001) using the sign test for analysis.

Complications (shown in graph 3) included skin tears, excessive pain, haematoma, bruising and swelling. There was a single case of lymphangitis, and no reports of flexor tendon rupture or acute anaphylactic reaction. All skin tears were managed conservatively. No patients reported cold intolerance or altered sensory function following treatment.

CONCLUSIONS and DISCUSSION

Our single unit study results reveal overall positive outcomes from CCH. Significant improvement in both joint angulation and URAM score were noted as a result of treatment and patient satisfaction was high. A low and acceptable complication rate is consistent with previous studies.

The use of a validated Dupuytren’s specific outcome measure adds to the study’s novelty, however the authors acknowledge that its main drawback is the retrospective URAM collection in a number of patients. We feel that this was necessary in order to recruit appropriate numbers to the study. As Dupuytren’s is a recurring disease we plan to continue this follow up study on a longer term basis.

REFERENCES