Managing advanced Dupuytren Disease with Collagenase: Is there a suitable cohort?

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Introduction

Dupuytren disease (DD) is a benign progressive fibroproliferative disorder caused by the formation and deposition of abnormal collagen. It is a common condition with prevalence rates up to 50% of the population depending on country, gender and age. Currently there is no cure for DD. Treatment includes non-surgical (Collagenase Clostridium Histolyticum and radiation therapy) and surgical (open fasciectomy with or without grafting and percutaneous needle aponeurotomy). Non-surgical treatments are generally considered most effective when used before the condition becomes severe. The mainstay of treatment of advanced DD is surgery. Collagenase Clostridium Histolyticum (CCH) is the latest non-surgical treatment modality for DD. Multiple studies have shown CCH to be safe and effective in the treatment of patients with mild DD, Tubiana I and II. The use of CCH for severe DD (Tubiana III and IV) has not been specifically reported in the literature. This study aims to demonstrate the safety and early efficacy of using CCH in this patient group.

Methods

Patients seen in the Peninsula Health Dupuytren’s Clinic between February 2016 and June 2017 who were assessed to be suitable for CCH injection were identified (n=139). Tubiana grade and total passive extension deficit (TPED) were measured prior to treatment as well as post-manipulation and at each subsequent follow-up appointment. CCH injection is performed under local anaesthetic and manipulation for all patients is performed day 7 post-injection. Two PROMs (patient reported outcome measures) were used in this study. The Unite Rhumatologique des Affections de la Main Scale and The Southampton Dupuytren Scoring Scheme. Data analysis was performed using STATA (version 15). Paired t-test and one-way repeated ANOVA was used to determine the statistical significance of results for normally distributed data. P-value of <0.05 was considered statistically significant. Ethics approval for this project was obtained from the Peninsula Health Human Research Ethics Committee (HREC LRR17PH7).

Results

A total number of 139 patients with DD (Tubiana I-IV) managed with CCH injection were seen in our institution during the study period. 33 (23.7%) patients had severe Dupuytren disease (Tubiana III-IV) with a mean age of 68.4 years. There was a significant improvement in TPED across all injected rays (p<0.001). In addition, patients demonstrated highly significant improvement in function and quality of life on Southampton (p=0.0004) and URAMS (p=0.000001) questionnaires.

Conclusion

Our data suggest that collagenase, as a treatment option, is safe to use in patients with advanced Dupuytren Disease. It demonstrates significant improvement in both quantitative and qualitative measures of hand function. Whilst surgery remains the mainstay of management for advanced disease, CCH is a viable alternative for patients in whom surgery is not appropriate.

References