

EFFECT OF INTRODUCING *CLOSTRIDIUM HYSTOLITICUM* COLLAGENASE FOR TREATING DUPUYTREN DISEASE IN A HOSPITAL

Domínguez Gozalo, A¹. Ricote Lobera, I¹. Santos Mena, B¹. Tejedor Prado, P¹. Simón Carrascal, A². Fraile Gil, S¹. Hidalgo Correas, FJ¹. García Díaz, B¹.

¹Servicio de Farmacia, Hospital Universitario Severo Ochoa.

²Servicio de Traumatología, Hospital Universitario Severo Ochoa

Dupuytren disease leads to progressive fingers contractures, limiting hand function. Traditional treatment consists of open partial fasciectomy that implies hospitalization, anesthesia and physical therapy. Recent introduction of *Clostridium hystoliticum* collagenase in therapy has minimized the economic impact.

PURPOSE

To evaluate effectiveness, safety and economic impact of collagenase versus fasciectomy after its introduction in the hospital.

MATERIALS AND METHODS

- Retrospective observational study was performed in a university hospital of 400 beds. All patients treated with collagenase since May 2012, were enrolled in the study.
- Data were collected from medical histories to study efficacy and safety: sex, age, concomitant disease, pharmacotherapeutic history, previous surgeries and adverse events.
- We considered treatment was effective when residual contracture was $<5^\circ$ after 4 weeks of collagenase injection.
- Costs of surgery and consultation were obtained from GECLIF (Financial Clinical Management) application. Cost of collagenase was calculated based on average price of its acquisition to pharmacy.
- Average cost of fasciectomy includes costs of surgery, hospital stay and associated consultations. Average cost of treatment with collagenase includes costs of drug and associated consultations.
- We compared average costs between the two treatments using T-Student-Fisher Test. Confidence intervals were calculated for a confidence level of 95% (CI95%) and p values ≤ 0.05 were considered statistically significant.

RESULTS

EPIDEMIOLOGY:

- 9 subjects (7 men and 2 women) with an average age of 68 years (range 62-76), diagnosed of *Dupuytren* with palpable cord.
- 55,6% had relapsed after previous surgery.
- Injectable collagenase was administrated in metacarpophalangeal joints (66,7%) or interphalangeal joints (33,3%).

EFFICACY:

- Residual contracture $< 5^\circ$ was achieved in 88,9% (n=8) of patients.
- None experienced relapse.
- One was recently treated, so we have no efficacy results.

ADVERSE EVENTS:

- Mild to moderate adverse events were reported in 88,9% of patients that were resolved with appropriate treatment.
- Peripheral edema and hematoma (77,8%).
- Skin lacerations at injection site (44,4%)
- Paresthesia and pain (11,1%)
- Scab, erythema or pruritis (33,3%).
- No serious adverse events occur

COSTS:

Average cost per patient for fasciectomy was 1.503,05€ and for treatment with collagenase was 922,78€. Collagenase treatment cost was an average of 580,28€ (509,51-651,06€, CI95%; $p < 0,001$) cheaper per patient than fasciectomy.

CONCLUSIONS

Treatment for *Dupuytren* with collagenase is effective and well tolerated in most of patients. It represents a decrease of 38,6% in costs to hospital versus average cost of fasciectomy per patient.

REFERENCES

1. Rozen WM, Edirisinghe Y, Crock J (2012) Late Complications of Clinical *Clostridium Histolyticum* Collagenase Use in Dupuytren's Disease. PLoS ONE 7(8):e43406.
2. Lawrence C. Hurst, M.D., Marie A. Badalamente, Ph.D., Vincent R. Hentz, M.D., Robert N. Hotchkiss, M.D., F. Thomas D. Kaplan, M.D., Roy A. Meals, M.D., Theodore M. Smith, Ph.D., and John Rodzvilla, M.D. Injectable Collagenase *Clostridium Histolyticum* for Dupuytren's Contracture. N Engl J Med 2009;361:968-79.