

Name

Alejandro Trujillo

Email

atmhand23@gmail.com

Title

Effectiveness of the Botulinum Toxin type A applied in the Palmaris Longus in patients with Idiopathic Carpal Tunnel Syndrome.

Purpose

The etiology of carpal tunnel syndrome (CTS) is a subject of intense controversy. It has been related to biologic, genetic, anatomic and mechanical factors. However the increase of the intracarpal pressure is recognized as an important part of the pathophysiology and the action of the palmaris longus has been considered a strong risk factor despite being a wrist flexor weak muscle, it is capable of changing the geometry of carpal tunnel and increase the hydrostatic pressure. Purpose: Evaluate the clinical effect of the botulinum toxin type A (BTX-A) applied in the palmaris longus in patients with idiopathic carpal tunnel syndrome.

Methods

A prospective, comparative, randomized study was done in eleven patients with diagnosis of idiopathic CTS, seven patients with both hands affected and four patients with one hand affected (18 hands), each patient was examined for the presence of palmaris longus. The experimental group (10 hands) 25 UI of BTX-A was applied in 0.25 ml of sterile solution in the motor point of palmaris longus and the control group 0.25ml of sterile solution. Both groups entered a program of ten sessions of physical therapy. The changes were evaluated according Boston questionnaire and Michigan hand questionnaire before injection of BTX-A and 8 and 16 weeks after treatment.

Results

In the experimental group a significant difference in the symptoms was observed in seven of ten patients ($p < 0.0001$) and functional status show significant differences ($p < 0.001$).

Conclusion

Botulinum toxin type A was administered in the motor point of the palmaris longus to inhibit its muscular action, and this way neutralize its effect in pressure carpal tunnel, that effect could explain the improvement in the clinical symptoms, however long term studies are missing to determine much better the effectiveness of this alternative treatment.