

Arthroscopic Treatment for Frozen Shoulder in Hashimoto Thyroiditis - A Pilot Study

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Summary:

Find a strategy for the treatment of frozen shoulder in patients with Hashimoto thyroiditis and investigate whether there is a correlation between the severity of the disease and frozen shoulder

Abstract:

INTRODUCTION

Hashimoto's thyroiditis is one of the most common causes of hypothyroidism and the strong correlations between hypothyroidism and musculoskeletal disorders are well known. In particular, frozen shoulder is a common condition in patients with thyroid disorders. The primary aim of this study is to find an effective strategy for the treatment of frozen shoulder in patients with Hashimoto thyroiditis. The secondary objective is to investigate whether there is a correlation between the severity of the disease and frozen shoulder

METHODS

We selected a total of 100 patients affected by frozen shoulder with certain diagnosis of Hashimoto thyroiditis excluding other general comorbidities (diabetes, cardiopathies, tumors, etc.). First line treatment consisted in 3 weekly corticosteroid injections and supervised rehabilitation for 6 weeks. 60 patients who failed to respond to this treatment, underwent a shoulder MRI that showed capsulitis and long head of biceps (LHB) tendinopathies. We divided these patients in two groups: 30 patients underwent manipulation under anaesthesia and 30 patients underwent arthroscopic release, bursectomy and LHB tenotomy. Clinical score (Constant score and VAS pain) was administered and ROM measurement was taken pre-operatively and at 1 and 3 months post-operatively. Furthermore we tested thyroid-stimulating hormone (TSH), free T3, free T4, the anti-thyroglobulin antibodies (anti-Tg) and anti-thyroid peroxidase antibodies (anti-TPO).

RESULTS

All patients achieved a statistically significant clinical improvement from preoperative to postoperative time at 1 month follow-up (FU). However patients treated with manipulation under anaesthesia complained greater pain compared to patients treated arthroscopically (VAS pain $P < 0.05$) and at third month FU they had recurrence of the disease.

Additionally we observed high level of TSH, anti-Tg and anti-TPO in patients who failed conservative treatment.

DISCUSSION & CONCLUSION

Arthroscopic release is an effective treatment in patients affected by Hashimoto thyroiditis with frozen shoulder, allowing a quicker and less painful mobility and avoiding the recurrence of the disease. Furthermore, given the high

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levels of antibodies and TSH in patients in whom conservative treatment has failed, we can assume that a more effective control of the thyroiditis may lead to a lower severity of frozen shoulder.

This pilot study has allowed us to assess the correct methodological approach to the patient with autoimmune hypothyroidism with frozen shoulder in which the first line of conservative treatment has failed. However, there is a need of better designed randomized trials with larger population, in order to confirm with a stronger level of evidence the promising preliminary results achieved by the current study.