



Original Article

Syndrome of fascial incarceration of the long thoracic nerve: winged scapula[☆]



Jefferson Braga Silva^{a,b}, Samanta Gerhardt^{c,*}, Ivan Pacheco^{b,d}

^a Universidade Federal de São Paulo (UNIFESP), São Paulo, SP, Brazil

^b Hospital São Lucas, Pontifícia Universidade Católica do Rio Grande do Sul (PUC-RS), Porto Alegre, RS, Brazil

^c School of Medicine, Pontifícia Universidade Católica do Rio Grande do Sul (PUC-RS), Porto Alegre, RS, Brazil

^d Institute of Sports Medicine, Hospital Mãe de Deus, Porto Alegre, RS, Brazil

ARTICLE INFO

Article history:

Received 1 July 2014

Accepted 16 September 2014

Available online 2 September 2015

Keywords:

Scapula

Thorax

Nerve compression syndromes

ABSTRACT

Objective: To analyze the results from early intervention surgery in patients with the syndrome of fascial incarceration of the long thoracic nerve and consequent winged scapula.

Methods: Six patients with a syndrome of nerve trapping without specific nerve strain limitations were followed up.

Results: The patients achieved improvement of their symptoms 6–20 months after the procedure. The motor symptoms completely disappeared, without any persistent pain. The medial deformity of the winged scapula improved in all cases, without any residual esthetic disorders.

Conclusion: The approach of early surgical release seems to be a better predictor for recovery from non-traumatic paralysis of the anterior serratus muscle.

© 2014 Sociedade Brasileira de Ortopedia e Traumatologia. Published by Elsevier Editora Ltda. All rights reserved.

Síndrome do aprisionamento fascial do nervo torácico longo: escápula alada

RESUMO

Objetivo: Analisar os resultados de cirurgia de intervenção precoce em pacientes com síndrome do aprisionamento fascial do nervo torácico longo e consequente escápula alada.

Métodos: Acompanhamos seis pacientes com uma síndrome de aprisionamento sem restrições específicas de estiramento ao nervo.

Resultados: Pacientes tiveram melhoria em seus sintomas seis a 20 meses após o procedimento. Sintomas motores melhoraram completamente sem qualquer dor persistente. A deformidade medial da escápula alada melhorou em todos os casos sem distúrbios estéticos residuais.

Palavras-chave:

Escápula

Tórax

Síndromes de compressão nervosa

[☆] Work developed at Hospital São Lucas, Pontifícia Universidade Católica do Rio Grande do Sul (PUC-RS), Porto Alegre, RS, Brazil.

* Corresponding author.

E-mail: samanta.gerhardt@gmail.com (S. Gerhardt).

<http://dx.doi.org/10.1016/j.rboe.2015.08.011>

2255-4971/© 2014 Sociedade Brasileira de Ortopedia e Traumatologia. Published by Elsevier Editora Ltda. All rights reserved.

Conclusão: A abordagem de liberação cirúrgica precoce parece ser um melhor preditor na recuperação de paralisia não traumática do músculo serrátil anterior.

© 2014 Sociedade Brasileira de Ortopedia e Traumatologia. Publicado por Elsevier Editora Ltda. Todos os direitos reservados.

Introduction

Winged scapula is an uncommon condition that affects the scapulothoracic stabilizer muscles that cause separation of the scapula from the ribcage.¹ The anterior serratus, which is innervated by the long thoracic nerve, is involved in abduction and elevation of the shoulder and attaches the scapula to the ribcage. Any type of strain or force on this nerve may result in paralysis of the muscle.^{2,3} In situations without signs of trauma or force, the etiology may be insidious and compressive, caused by the muscle itself and its superficial fascia.^{4,5}

The clinical history and physical examination are a reliable basis for the diagnosis, although electromyography can also demonstrate the impact on the nerve.^{1,6} The present article focuses on occurrences of winged scapula due to paralysis of the anterior serratus, with secondary consideration given to the compression syndrome of the long thoracic nerve.

In our case series, we present a syndrome of incarceration without any specific restrictions due to nerve strain. Our intention was to analyze early surgical intervention, which consists of full release of the fascia that compresses the entire path of the long thoracic nerve, performed within six months of the appearance of the initial symptoms, even though some authors have recommended conservative treatment for this condition.³ Through this approach, we believe that the risk of developing sequelae is diminished, which therefore allows patients to return to their routine more rapidly.

Methods

Six patients were chosen through the inclusion criteria, i.e. those who presented a syndrome of fascial incarceration without any specific restrictions of nerve strain were used as controls. Traumatic events were not associated with this and other etiologies of effort were discarded. All the cases in this series presented at least three months of symptoms consistent with pain, a certain degree of deficiency of the shoulder and paralysis of the anterior serratus alone induced by a winged scapula. No comorbidities and no relevant medical findings were recorded in any of the cases and a complete examination of the shoulder was performed in each case.

None of the patients were able to determine exactly when their symptoms had started and none of them reported having suffered any type of trauma or physical stress relating to their condition. Surgical treatment was considered six months after the start of the symptoms in each case.

An approach involving a medial axillary incision was used in all the cases to identify the long thoracic nerve and release it from its course along the anterior serratus muscle, between the superficial fascia and the digitations of the muscle. The

mean length of follow-up was 24 months, with a range from 18 to 32. The patients' mean age was 28 years, with a range from 16 to 34. There were four female patients and two male patients. Four patients made a living doing work with low manual impact, while the other two were adolescents without any athletic activities. Only two of the six patients underwent electromyography, which we had not indicated, since we believe that the diagnosis can be made purely from the clinical examination findings.

Results

In all the cases, the patient's dominant side was compromised. All the patients present pain and a certain degree of limitation of the scapular belt, which was exacerbated through frontal elevation and abduction. All of them presented scapular deformation that distressed them esthetically (Figs. 1 and 3).

The long thoracic nerve was found to be currently in its usual position. No specific compressive site was identified. Thus, no ischemic alteration was noted in any specific portion of the nerve. Neurolysis was performed along the entire course of the nerve, from proximal to distal and over its top surface, which released the fascial compression over the muscle, thereby carefully preserving the intermuscular and end branches.

The patients presented improvements in their symptoms 6–12 months after the procedure. The length of the recovery period ranged from 6 to 12 months. The motor symptoms improved completely, without any prolonged pain. The medial scapular deformity improved in all the cases, without any residual esthetic disorders (Figs. 1–5).



Fig. 1 – Case 1, before the operation. Unstable winged scapula.

Download English Version:

<https://daneshyari.com/en/article/2718180>

Download Persian Version:

<https://daneshyari.com/article/2718180>

[Daneshyari.com](https://daneshyari.com)