

ORIGINAL ARTICLE

## Comparison of functional results of two fixation systems using single-row suturing of rotator cuff<sup>☆</sup>



M.P. Muniesa-Herrero<sup>a,\*</sup>, A. Torres-Campos<sup>a</sup>, A. Urgel-Granados<sup>b</sup>,  
J.A. Blanco-Llorca<sup>a</sup>, L.J. Floría-Arnal<sup>b</sup>, J.C. Roncal-Boj<sup>a</sup>, A. Castro-Sauras<sup>a</sup>

<sup>a</sup> *Facultativo especialista, Área de Cirugía Ortopédica y Traumatología, Hospital Obispo Polanco, Teruel, Spain*

<sup>b</sup> *Médico interno residente, Cirugía Ortopédica y Traumatología, Hospital Obispo Polanco, Teruel, Spain*

Received 12 January 2017; accepted 12 December 2017

### KEYWORDS

Cuff rotator;  
Suture;  
Single row;  
Implants

### Abstract

*Introduction:* Arthroscopic repair of rotator cuff disorders is a technically demanding but successful procedure. Many anchor and suture alternatives are now available. The choice of the implant by the surgeon is less important than the configuration of the suture used to fix the tendon, however it is necessary to know if there are differences in the results, using each one of them.

The aim of the study is to evaluate if there are differences between the knotted and non-knotted implant in terms of functional and satisfaction results.

*Material and methods:* A retrospective study was carried out on 83 patients operated between 2010 and 2014 in our center using 2 anchoring systems with and without knotting (39 versus 44 patients respectively), with single row in complete rupture of the rotator cuff.

*Results:* At the end of the follow-up, an average score was obtained on the Constant scale of 74.6 points. 98% of the patients considered the result of the surgery satisfactory. Statistically, there were no significant differences between the 2 groups in terms of functionality, satisfaction or reincorporation to activities.

*Discussion and conclusions:* The functional results of the single-row cuff suture are satisfactory, although biomechanical studies show advantages in favor of sutures that reproduce a transoseo

<sup>☆</sup> Please cite this article as: Muniesa-Herrero MP, Torres-Campos A, Urgel-Granados A, Blanco-Llorca JA, Floría-Arnal LJ, Roncal-Boj JC, et al. Comparación de resultados funcionales en 2 sistemas de fijación mediante hilera simple en sutura de manguito rotador. Rev Esp Cir Ortop Traumatol. 2018;62:178–184.

\* Corresponding author.

E-mail address: [pimuniesa@gmail.com](mailto:pimuniesa@gmail.com) (M.P. Muniesa-Herrero).

**PALABRAS CLAVE**

Manguito rotador;  
Sutura;  
Hilera simple;  
Implantes

system. In our series of patients the presence of knotting does not show per se a significant functional difference being both superimposable techniques in absolute values of functionality and patient satisfaction.

© 2018 SECOT. Published by Elsevier España, S.L.U. All rights reserved.

## Comparación de resultados funcionales en 2 sistemas de fijación mediante hilera simple en sutura de manguito rotador

### Resumen

**Introducción:** La reparación artroscópica de los trastornos del manguito rotador es un procedimiento técnicamente exigente pero exitoso. En la actualidad hay disponibles muchas alternativas de anclas y suturas. La elección del implante por parte del cirujano es menos importante que la configuración de la sutura usada para fijar el tendón, no obstante hay que conocer si existen diferencias en cuanto a los resultados, utilizando cada uno de ellos.

El objetivo del estudio es valorar si existen diferencias entre el implante anudado y no anudado en cuanto a resultados funcionales y de satisfacción.

**Material y métodos:** Se realiza un estudio retrospectivo en 83 pacientes intervenidos entre 2010 y 2014 en nuestro centro mediante 2 sistemas de anclaje con y sin anudado (39 frente a 44 pacientes respectivamente), con hilera simple en rotura completa de manguito rotador.

**Resultados:** Una vez finalizado el seguimiento, se consiguió una puntuación media en la escala de Constant de 74,6. Un 98% de los pacientes, consideraron el resultado de la cirugía como satisfactorio. A nivel estadístico no hubo diferencias significativas entre ambos grupos en parámetros de funcionalidad, satisfacción ni reincorporación a actividades.

**Discusión y conclusiones:** Los resultados funcionales de la sutura de manguito mediante hilera simple son satisfactorios, aunque estudios biomecánicos muestran ventajas a favor de suturas que reproducen un sistema transóseo. En nuestra serie de pacientes la presencia de anudado no muestra per se una diferencia funcional significativa siendo ambas técnicas superponibles en valores absolutos de funcionalidad y satisfacción de los pacientes.

© 2018 SECOT. Publicado por Elsevier España, S.L.U. Todos los derechos reservados.

## Introduction

The incidence of shoulder pain in the general population stands at around 4%<sup>1</sup> and it is often associated with rotator cuff disorders, especially in older adults. The incidence of rotator cuff lesions found in cadaveric studies varies from 7%<sup>2</sup> to 20%,<sup>3</sup> and it reaches up to 30%<sup>4</sup> if partial thickness lesions are included. In patients with degenerative or inflammatory tendon pathologies of the cuff the treatment of choice is conservative, although if tendon continuity solutions exist in symptomatic patients then surgical treatment should be considered.

Tearing of the rotator cuff is among the most common diseases at the level of the shoulder blades, and it is a growing problem in the population aged over 50 years old. The aims of treating these lesions are to eliminate pain, restore functioning and preserving biomechanical properties to prevent the progression of arthropathy and the resulting rise of the humeral head.

The results of treating these lesions using arthroscopic techniques are good to excellent in the majority of cases.<sup>5-8</sup> Arthroscopic techniques have been shown to be less invasive, while they make it possible to preserve the insertion of the deltoids and require less soft tissue dissection.<sup>9</sup> The

ideal repair should be as anatomical as possible, with a strong initial anchorage while reducing the formation of gaps during the tendon integration process in the bone. Although single row suture technique is considered to be the standard in treating these lesions, a double row reproduces a mechanically superior structure (in terms of strength and rigidity). When their functional results were compared in recent randomized studies and different meta-analyses, both methods were found to be similar.<sup>10-12</sup>

Single row cuff sutures have also been studied to compare knotted vs. non-knotted implants. These studies show that non-knotted techniques give superior biomechanical results.<sup>13</sup>

Given our experience in single row cuff sutures and the proven theoretical biomechanical superiority of knotless implants, we propose a study to compare the clinical results and patient satisfaction when 2 different anchoring systems are used (knotted and knotless).

## Material and methods

A retrospective study was undertaken of 2 cohorts of patients in which 2 different systems supraspinatus suture

Download English Version:

<https://daneshyari.com/en/article/8803218>

Download Persian Version:

<https://daneshyari.com/article/8803218>

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