+ Evidence in focus

Poster summary

Smith-Nephew

REGENETEN^o Bioinductive Implant has a low incidence of stiffness post-operatively in both partial- and full-thickness rotator cuff tears

Bushnell BD, Piller CP, Hicks JS, Jarvis B, Jarvis RC, Baudier RS. Rotator cuff repair with a bioinductive bovine collagen implant has a low incidence of post-operative stiffness: review of 406 shoulders. Poster presented at the Annual Academy of Orthopaedics Surgeons (AAOS) Annual Congress; March 7-11 2023; Las Vegas, Nevada, USA.



Overview

- A 2021 study reports post-operative shoulder stiffness being a common event affecting 7.6% of patients¹
- Retrospective study of 406 cases* (368 patients*) of partialthickness (n=137) or full-thickness (n=269) rotator cuff tears
- All patients received the REGENETEN Bioinductive Implant
- Exclusion criteria: open rotator cuff repair, superior labrum anterior to posterior (SLAP) repair, os acromiale procedure and subacromial balloon spacer
- Primary outcome was stiffness defined as a loss of passive range of motion in at least two planes with cutoffs of:
 - 120° of forward elevation
 - 30° of external rotator
 - Internal rotation to the buttock
- Secondary outcome was any secondary intervention for post-operative stiffness
- 32-month average follow-up (range: 2–102 months)

*The number of cases and patients differs because some patients had a bilateral rotator cuff repair.

Results

- A low incidence of post-operative stiffness (3.2%; 13/406) with a minimum of two months follow-up:
 - 1.5% (4/269) in full-thickness tears
 - 6.6% (9/137) in partial-thickness tears
- A low incidence of cases requiring secondary intervention for post-operative stiffness (2.7%; 11/406) with a minimum of two months follow-up:
 - Arthroscopic lysis of adhesions (n=10)
 - Isolated manipulation (n=1)
- Most of the patients who experienced stiffness (11/13) were at risk of one or more factors including:
 - Diabetes
 - Smoking/tobacco use
 - Thyroid disease
 - Workers' compensation status



Figure. Cases of full- and partial-thickness tears post-operatively free of stiffness or with stiffness*

*Stiffness defined as a loss of passive range of motion in at least two planes with cutoffs of: 120° of forward elevation; 30° of external rotator; internal rotation to the buttock.

Conclusions

In this retrospective case series, the REGENETEN Bioinductive Implant is associated with a low incidence of post-operative stiffness in cases of partial- and full-thickness rotator cuff tears, with very few patients requiring secondary intervention for post-operative stiffness.

For detailed product information, including indications for use, contraindications, precautions and warnings, please consult the product's applicable Instructions for Use (IFU) prior to use.

1. Flesch Q, Mai V, Durchholz H, et al. Complications within 6 months after arthroscopic rotator cuff repair: registry-based evaluation according to a core event set and severity grading. Arthroscopy. 2021;37(1):50–58.

Sports Medicine, Smith & Nephew, Inc. 150 Minuteman Road, Andover MA, 01810 USA. 39064-en V1 0423. Published April 2023. ©2023 Smith+Nephew. All rights reserved. °Trademark of Smith+Nephew. All Trademarks acknowledged.