Smith+Nephew

HEALICOIL◊ REGENESORB◊ Suture Anchor mostly resorbed and replaced by new bone material within 21 months of arthroscopic rotator cuff repair

Vonhoegen J, John D, Hägermann C. Osteoconductive resorption characteristics of a novel biocomposite suture anchor material in rotator cuff repair. *J Orthop Surg Res.* 2019;14:12.

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Key points

Following arthroscopic rotator cuff repair with HEALICOIL REGENESORB Anchors, at 21 months follow-up:

79% of implants **could not be distinguished from adjacent bone material**

96% of patients achieved **complete healing**

2.4% of anchors showed **osteolysis**

Overview

- Retrospective, single-centre study assessing the resorption and osteoconductive properties of a novel biocomposite material, REGENESORB, comprising 65% polylactic-co-glycolic acid (PLGA), 15% beta-tricalcium phosphate (ß-TCP) and 20% calcium sulfate (CS)
  - 48 patients underwent arthroscopic single-row rotator cuff repair with a 5.5mm HEALICOIL REGENESORB Anchor (82 suture anchors, average 1.71 anchors per patient)
- Outcomes included MRI evaluation of implant resorption, osteolysis and re-tear rate at a mean follow-up of 21.2 months

Results

- At 21 months, 79% (65/82) of implants (75% of patients) could not be distinguished from adjacent bone material on MRI (Figure)
  - No significant correlation between anchor resorption and age, re-tear rate, defect size, gender, number of anchors, and grade of retraction
- Osteolysis was detected in only 2.4% (2/82) of anchors, with no reaction exceeding the diameter of the former suture anchor (5.5mm) and no peri-anchor cyst formation
  - No significant correlation between osteolysis and patient age, gender, re-tear rate, or size of the defect
- Complete healing was achieved in 96% (46/48) of patients and no anchor pull-out complications were detected

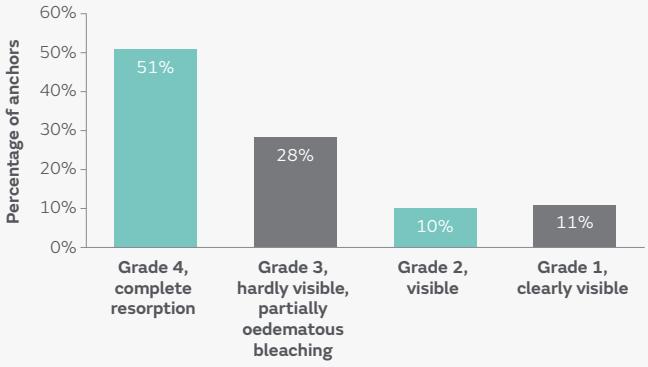

Figure. HEALICOIL REGENESORB Anchor resorption at 21 months post-operatively

Conclusions

The HEALICOIL REGENESORB Anchor provides strong primary stability, reliable degradation and maintains bone quality of the rotator cuff footprint. Preserving bone quality aids the clinical situation when revision surgery is required. Resorption characteristics and osteolysis occurrence appeared better compared to existing evidence of commonly used anchor materials containing PLLA (poly-L-lactide) and PDLDA (poly-D-L-lactide).

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