

HEALICOIL[®] REGENESORB biocomposite suture anchor mostly resorbed and replaced by new bone material within 21 months of arthroscopic rotator cuff repair (RCR)

No severe osteolysis or cyst formation observed at any anchor site



Study 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 (β -TCP) and 20% calcium sulfate (CS)
 - 48 patients underwent arthroscopic single-row RCR with 5.5mm HEALICOIL REGENESORB Suture 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



Key results

- At 21 months, 79% of implants (75% patients) could not be distinguished from adjacent bone material (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 2/82 anchors (2.4%), 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 46/48 (96%) patients and no anchor pull-out complications were detected

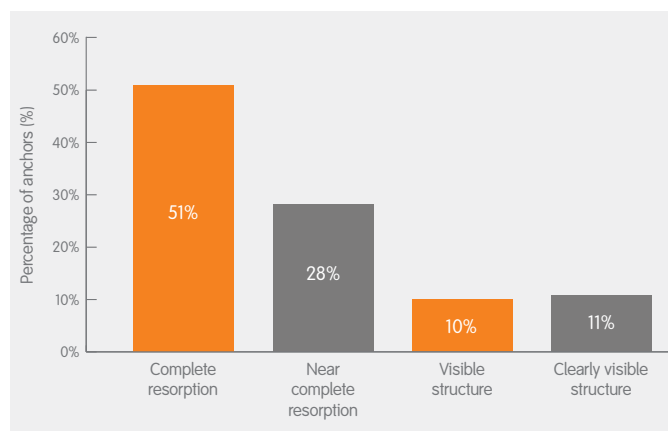


Figure. Level of resorption of 82 implanted suture anchors



Conclusion

HEALICOIL REGENESORB biocomposite suture 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 superior compared to existing evidence of commonly used anchor materials containing PLLA (poly-L-lactide) and PDLDA (poly-D-L-lactide).



Study citation

*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(1):12.
Available at: [Journal of Orthopaedic Surgery and Research](#) 