Analysis of Outcomes in Arthroscopic Rotator Cuff Repair Using the ICONN Answer Suture Anchor

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Background:

The ICONN Answer (Birmingham, AL) novel suture anchor system is a polyether-ether ketone (PEEK) device for rigid fixation of soft tissue to bone – applicable to a number of clinical scenarios. While the orthopedic market for this type of device is indeed crowded with a number of highly capable alternatives, it is the stated objective of ICONN to provide a suitable alternative of high quality and high clinical performance while providing dramatic economic efficiencies. It is apparent that basic science and economic measures of the device have been readily achieved; it is the thesis of this case review study that clinical outcomes are, likewise, equal to or superior to market alternatives.

Hypothesis:

Clinical outcomes in arthroscopic rotator cuff repair using the ICONN Answer suture anchor meet or exceed the results of alternatives as currently reported in the orthopedic literature.

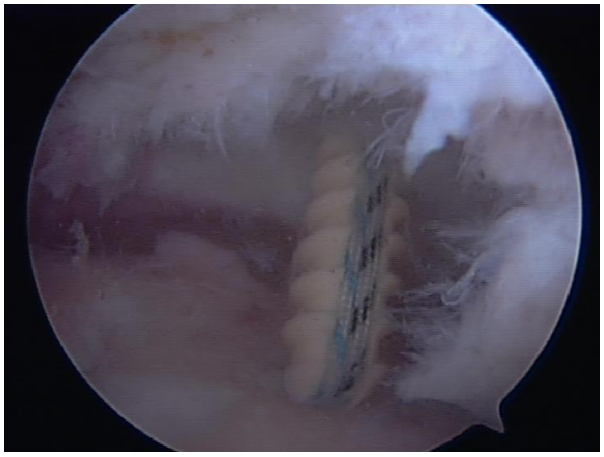

Figure 1. ICONN Answer Suture Anchor in vivo

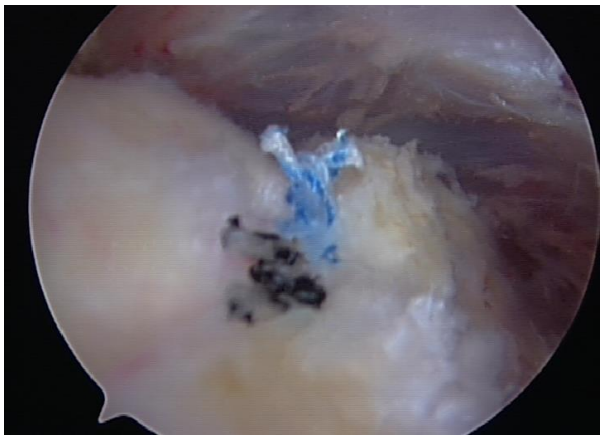

Figure 2. Final Repair with ICONN Answer Suture Anchor

Design:

Prospective, non-blinded, single-surgeon, single-center study.

Methods:

Fifty consecutive patients diagnosed with supraspinatus rotator cuff tears, with or without concomitant infraspinatus, subscapularis, and/or labral pathologies underwent arthroscopic repair using the ICONN Answer system. Patients were analyzed pre-operatively and at six month postoperative intervals for demographics, American Society of Elbow and Shoulder Surgery (ASES) and University of California at Los Angeles (UCLA) shoulder scores, return to desired level of activity, patient satisfaction, and outcome level (poor, fair, good, excellent). Patients were also monitored for participation in workers compensation programs, complications, and other extenuating circumstances.

Results:

The patient demographics in the study were as follows: 27 females, 23 males. Average age 55.08, 22 left, 28 right, 32 dominant, 18 non-dominant extremities. 11.2 months average follow up time. Overall, the mean ASES score improved from 34.14 to 88.3, the mean UCLA score improved from 15.6 to 31.04. Patients expressed satisfaction with the outcome in 94% of cases and Good/Excellent outcomes were subjectively determined in 92% of cases. Forward elevation improved from 53 degrees on average to 168 degrees. There were six cases that were deemed to be "massive" tears or involved a concomitant subscapularis repair or labral repair, however the results in the outcomes measures in these cases were not of any statistically significant variability. There were no cases of infection or early failure. There was only one return to the OR for all reasons, in this particular case, the return was determined to be due to arthrofibrosis. There were 6 cases which were worker's compensation cases. Only one of these had not been released to full work capacity at the time of this study. 7 patients had not returned to their desired level of activity, however, it should be noted that these were all within 6 months of follow up.

Conclusions:

The results of this case series are comparable or, in many cases, exceed the results of available data in the orthopedic literature for similar pathology and clinical care. As such, it is concluded that the ICONN Answer suture anchor is a viable alternative to commercially available products on the market.

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