

Abstract



Three-Year Results of Transosseous-Equivalent Double-Row vs Single- Row Repair of Small and Large Rotator Cuff Tears. A Randomized Controlled Trial

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Abstract:

Background: A transosseous-equivalent double-row (TEDR) rotator cuff repair is biomechanically superior to a single row (SR) repair, with increased coverage of the native footprint and increased pull out strength.

Purpose: To prospectively compare the functional outcome of patients undergoing arthroscopic rotator cuff repair using TEDR or SR suture anchor techniques at three years postoperatively for both large (over 3cm) and small (under 3cm) tears.

Study Design: Randomized controlled trial

Level of evidence: Level I therapeutic study

Hypothesis: Patients undergoing TEDR cuff repair will have significantly improved shoulder function and range of motion when compared to SR cuff repair for large and small tears.

Methods: Eighty patients were randomized to TEDR repair (n=40) or SR repair (n=40). Subgroup analysis was conducted for tears < 3 cm (TEDR n = 17, SR n=19) and tears > 3 cm (TEDR n=23, SR n=21). Primary outcomes included the Oxford Shoulder Score (OSS), the University of California, Los Angeles score (UCLA), and the Constant-Murley Outcome Score (CMS). The secondary outcomes included a Visual Analogue Scale (VAS), range of motion (ROM) and EQ-5D.

Results There were a significant difference in the mean post-operative OSS score for tears >3cm (p=0.01) and mean improvement from baseline for OSS was significantly higher in the TEDR group (p=0.001). For tears >3cm, mean post-operative scores were also significantly higher in the TEDR group for UCLA (p=0.015) and CMS



(p=0.001). Post Hoc testing showed that the difference between these groups was statistically significant (p<0.05). For tears <3cm, a significant postoperative difference in favor of SR repair was seen with mean CMS (p=0.011), and post hoc testing showed that the difference was statistically significant (p=0.015). No significant difference was seen with mean post-operative OSS or UCLA and post hoc testing did not show a statistically significant difference between groups.

Conclusions: TEDR repair showed improved functional outcomes for tears greater than 3cm when compared to SR repair. For tears less than 3cm, no clear benefit was seen with either technique.

Biography:

Ahmad Nayef Althaher is doing his Msc in medical statitics in Oxford University and has finished his MBBS from Jordan University of Science and Technology age of 25 years. He is a junior doctor and researcher at Norfolk and Norwich university hospital. He has published many publications in reputed journals..

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