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A systematic review: Comparison of post-surgical recurrent instability following arthroscopic Bankart repair

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Introduction: Despite the growing demand for arthroscopic procedures, arthroscopic Bankart repair has yet to surpass its open alternative as the technique of choice for anterior shoulder stabilization. Anterior shoulder instability is a complex medical issue because of its tendency to result in recurrent subluxation of the humerus, transforming an injury from acute to chronic. Many variables of this arthroscopic technique have been measured to assess their influence on patient outcomes. Systematic reviews have been conducted to assess how patients positioned in beach chair versus lateral decubitus affect the rate of postsurgical recurrent instability. However in this systematic review, these parameters were examined using only Level I and II randomized clinical studies. Secondly, we will also assess the most commonly used patient reported outcome measures for shoulder instability.

Methods: A systematic review was performed using multiple medical databases in accordance with the preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines. The following databases were used: Pubmed, EMBASE and Cochrane Central Register of Controlled Trials. The search terms “arthroscopic” “Shoulder stabilization” Bankart repair” and “Bankart Lesion” generated a total of 376 studies. All English language Level I and Level II randomized controlled trials regarding Arthroscopic Bankart Repairs written from 1997 to 2016 was included. Studies detailing open Bankart repairs, revision repairs, cadaver studies and biomechanical laboratory studies were all excluded. Studies containing evidences levels of III and below were also excluded. These parameters resulted in the exclusion of 354 studies. Studies were subsequently analyzed by two independent reviewers and an additional 13 studies were then excluded resulting in a total of 9 studies included in the systematic review.

Results: 9 studies (4 BC position, 5 LD position) met the inclusion criteria. A total of 734 shoulders included, with 553 surgeries were performed in beach chair position while 181 were performed in lateral decubitus. The average age of patients was 26.4 (range 15–50). Average overall recurrent instability rates for the beach chair group was 5.1% compared to 4.4% for the lateral decubitus group. Functional outcomes were also measured. Both positions had nearly identical postsurgical ROWE and CONSTANT scores.

Conclusion: In conclusion, lateral decubitus and beach chair position are both viable options for improving instability. Available evidence does not allow definitive conclusions, further research is needed. Failure definitions need to be standardized and universal functional outcome measures should be adopted for consistency. A survival regression should also be performed in order to further understand failure rates.

Level of Evidence: Level II, systematic review of studies with Level I and II evidence.

Biography

Ogechi Nwoko was born and raised in Los Angeles, California. She received her Bachelors in Biology with a double minor in Math and Physics from Xavier University of Louisiana. She is currently a second year medical student at Morehouse School of Medicine, with aspirations of becoming an Orthopaedic Surgeon. Ogechi is an Nth Dimensions Scholar. She participated in the Orthopaedic Summer Research Internship at the National Sports Medicine Institute in Lansdowne, Virginia in 2016.

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