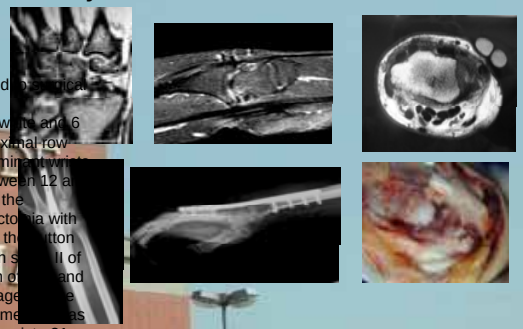
Prospective, Randomized and Comparison between Row Proximal Carpectomy and the Four Corners Fusion for Patients with SNAC

Authors: Aita MA, Ruggiero GM,Cho AB, Fukushima WY, Fujiki EN



Objective: To compare the clinical and functional outcome of patients with SNAC, in stage II and were submitted to surgical treatment by resection of the proximal row of carpal or arthrodesis of the four corners.

Patients: This study included 27 patients were randomized in order, with 24 males and three females, 21 were white and 6 non-white. Ages ranged from 18 to 59 years, the media 37.52. Thirteen patients underwent resection of the proximal row (eight dominant wrists and five non-dominant), in Group A and 14 wrists to the four corner arthrodesis (nine dominant wrists and five non-dominant), in Group B. Patients were evaluated before and after surgery with follow-up period between 12 and 37 months, the media 24.04. There was a measurement of range of motion, of grip strength Palms, the DASH, the subjective evaluation of pain and return to work. The surgical technique in group A consisted of proximal carpectomia with interposition of the capsule and dorsal radial estiloidectomia in group B and the fusion of the four corners using the button and graft taken from the carpal scaphoid. The inclusion criteria are: adults between 18 to 60 years, patients with stage II of SNAC in Krakauer, both sexes and who participated in all phases of the study (since the completion of the term of [illegible] and informed consent and that not left any stage of treatment). The exclusion criteria: patients with radiographic image [illegible] growth cartilage of the distal radio or with degenerative changes of the wrist not related to this pathology; osteomelitis as carrying diseases or autoimmune diseases, and patients undergoing any surgical treatment before the affected wrist . 21 patients were excluded from this test. This study was approved by the ethics committee and the institution where research was conducted. The values found were sent for statistical analysis.

Patients undergoing resection of the proximal row have 65.5% against 55.01% of the submitted to arthrodesis of the four corners of the arc of movement of the contralateral side. The strength of palmar prehension and 75.67% and 74.42% respectively in the side not affected. The values of the DASH and 11 for the resection of the proximal row and 13 in the arthrodesis of the 4 corners. Subjective evaluation of pain presents value of 2.4 in group A and 3.1 in group B. The complication rate in group A was 7.69% (1 / 13), this patient who developed symptomatic osteoarthritis in the midcarpal joint, and then subjected to total arthrodesis of the wrist and (fig.1,2,3,4,5), from 7.1% (1 / 14) in group B who presented pseudoarthrosis of the 4 corners and a loosening of screws, but that despite the poor clinical outcome, did not want to be subjected to review the procedure. Patients who returned to work in group B represent 57.14% (11 / 14) and 69.23% (11 / 13) of patients undergoing resection of the proximal row are currently working.

evidence:

Conclusion: The patients have statistically significant results to improve clinical and functional hand, gain in strength of palmar prehension, significant reduction of pain and increase quality of life after treatment of this disease by the two methods applied in this test.

However both are surgical methods of salvation, showing functional and social limitations to these individuals, with a reduction of the values found in all criteria examined in fists when compared to contralateral side.

Patients undergoing resection of the proximal row in the treatment of grade II SNAC gives better statistically significant results with respect to gain in strength of palmar prehension arthrodesis compared to the four corners. The other parameters evaluated did not show any statistically significant.