I Summary

Purpose: The reconstruction of the rotator cuff is a common orthopedic operation. In our hospital until 1999 these reconstructions were done in an open, standardised operative technique. The aim of this retrospective study was to investigate the subjective and objective 7-9 years results after open rotator cuff repair. In future these results could be used as a comparison for the evaluation of the currently performed rotator cuff repair techniques.

Patients and Methods: Between 1996 and 1999 surgical open repairs of full-thickness rotator cuff tears were performed in 85 patients (20 women, 65 men, mean age 67 $\pm$ 8 years). The refixation was performed with transosseus sutures, by side-to-side repair or with sutures anchors. 64 patients (18 women and 46 men) were examined (75,3%). The postoperative follow-up was performed at an average of 7,4 $\pm$ 0,9 years. The valuation consisted in an assessment of the operated shoulder joint with the Constant Score, in comparison to the contralateral side, retrospectively pre- and postoperative assessment of the Upper Limb-DASH (SF-36™), visual analog scale and radiography. Statistical analysis were performed with the SPSS software (descriptive statistic, linear regression, Spearman´s correlation coefficient, T-test for matched samples, Wilcoxon-test, Mann-Whitney U-test, Post-Hoc test: Bonferroni).

Results: The DASH-Score improved significantly from preoperativ 62 $\pm$ 17 points to postoperative 17 $\pm$ 19 points ($p < 0,01$). The patients had a significant reduction in pain from preoperative 7,3 $\pm$ 1,9 to postoperative 1,7 $\pm$ 2,2 ($p < 0,01$). 87,7% (n = 57) achieved excellent and good results in the age and gender related Constant Score. The Constant Score showed a significant difference between the operated shoulder (79 $\pm$ 16 points) and the other side (89 $\pm$ 12 points) ($p <0,01$). Each functionparameter of the Constant score, exclusive of strength, showed a significant difference ($p <0,001$) between the operated and contralateral side. There was no significant difference between the strength of the operated and contralateral shoulder. 93,38% of the contralateral strength was achieved. There was a significant correlation between the scores (Constant score, DASH, SF-36™) ($p < 0,001$) in regard to the 5 categories excellent, good, satisfying, moderate and worse. There was a significant difference for the mean

active abduction ($p < 0,05$) and active internal rotation ($p < 0,01$) between the operated and the other side. A comparison of follow-up radiographs with those obtained pre-operatively revealed a significant difference in the “upper” as well as in the “lower” measurement but had no significant influence on the clinical result of the Constant score.90,8% of the patients ($n = 59$) were satisfied with the result after rotator cuff repair. 78,5% would not hesitate to have the same procedure performed again.

Conclusions: The mid-term results of open rotator cuff repair revealed an improvement in objective shoulder function as well as subjective assessment with an overall 90,8% satisfaction rate. Particularly in regard to strength there was no significant difference between the operated and contralateral shoulder.