

## Arthroscopic Superior Capsular Reconstruction with Minimally Invasive Harvested Fascia Lata Autograft: Prospective Study of Donor Site Morbidity

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### Summary:

Fascia lata autograft harvesting site evaluation shows satisfactory subjective results and good functional outcomes, constituting a viable graft option for arthroscopic superior capsular reconstruction.

### Abstract:

Arthroscopic superior capsular reconstruction's promising results using fascia lata autograft have made this technique a viable alternative to reverse shoulder arthroplasty in the treatment of irreparable massive rotator cuff tears. Autologous fascia lata graft has been used in several medical fields, with good results reported in the literature. This graft's main disadvantage is the risk of donor site morbidity. The aim of this study was to prospectively evaluate the donor site morbidity in a group of patients who underwent arthroscopic superior capsular reconstruction using minimally invasive harvested fascia lata autograft.

15 patients were prospectively evaluated at 1 week and 6 months postoperatively. The fascia lata was harvested in a minimally invasive fashion through 2 transversal 2 cm incisions. The harvested graft had a medium size of 20cmx3cm. All patients underwent the same rehabilitation protocol. Body mass index (BMI), age, actual or previous corticotherapy and active smoking habits were evaluated. Functional outcome was accessed by the Non-Arthritic Hip Score (NAHS) applied to the harvested and to the contralateral thighs. All patients were questioned about: complications (pain, local swelling, haematoma or numbness) in the donor site, cosmetic satisfaction (0-5), daily activities limitations (yes/no), degree of limitation (0-5), subjective loss of strength (yes/no), additional physical therapy (yes/no) and overall satisfaction (0-5). Statistical analysis: IBM SPSS Statistics® 23. Significance level set to 0.05.

Mean patient age was 65 (range 47-77). 60% were female and 40% male. 7% were within the normal range of weight, 60% overweight, 27% obese and 6% extremely obese according to the BMI World Health Organization chart. 13% were active smokers. None was under active or previous corticotherapy. There was a decrease in the rate of complications between 1 week and 6 months postoperatively from 33% to 27% ( $p=0.004$ ). Concerning the cosmetic appearance 47% were very satisfied and 53% satisfied. 87% had no daily activities limitations, though 33% reported a subjective loss of strength. No patient needed additional physical therapy. Concerning overall satisfaction, 53% were very satisfied, 33% satisfied and 14% moderately satisfied. At 6 months postoperative the medium NAHS was 90 in the harvest limb and 99 in the contralateral limb: medium negative variation of 9 points with statistical significance ( $p=0.001$ ). There was a negative Pearson correlation between age and overall satisfaction ( $-0.331$ ) with no statistical significance ( $p=0.116$ ). The degree of limitation at 6 months postoperative correlated with NAHS in the harvested thigh ( $p=0.002$ ), and there was a statistical tendency in the correlation of this variable with BMI ( $p=0.096$ ). The minimally invasive fascia lata harvest technique resulted in satisfactory subjective results and good functional outcomes when compared to the contralateral thigh, suggesting that this could be a viable graft option in arthroscopic superior capsular reconstruction. The complications reported tended to decrease in the first 6 months postoperatively. The increased age and BMI seemed to correlate with worst functional outcome and subjective limitation, but with no statistical significance.