Comparison of mini-open intertubercular and subpectoral tenodesis of the long head of the biceps tendon A prospective case control study

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Introduction

Treatment of long head of biceps (LHB) tendon pathology is still controversial. Tenotomy is an easy and well recognized treatment for LHB pathology, although long term consequences such as Pop-eye sign and muscle cramps are reported unevenly in literature. Biceps tenodesis has become more popular, and there are various methods described. The present study is an evaluation of two methods for mini-open biceps tenodesis.

Material and Methods

From 2005-2011 24 consecutive patients underwent mini-open biceps tenodesis. The first 3 years the technique was an intertubercular tenodesis (IT, n=12) with a bioabsorbable anchor, and from 2008-2011 a subpectoral tenodesis (ST, n=12) with a peek anchor was performed. Patients with concomitant cuff repair were excluded. All patients had significant pathology of the LHB. The mean age at surgery was 39 (25-61) years for the IT-group and 47 (35-63) years for the ST-group. Seven (58%) in the IT group and 8 (67%) in the ST group were available for follow-up. The patients were evaluated with the Western Ontario Rotator Cuff Index (WORC) score preoperatively and at follow-up median 59 (49-77) months (IT) and 25 (13-45) months (ST) after the operation.

Results

The WORC scores improved from median 28 (3-49) % to median 68 (32-96) **%** in the IT-group, and from median 27 (2-62) % to median 58 (35-77) % in the ST-group (NS between groups). Four (57%) in the IT-group and 5 (63%) in the ST group had pain after the procedure for more than 3 months after the operation, of whom 1 in the IT group and 4 in ST-group still had pain at follow-up. There was 1 (14 %) with a pop-eye sign in the IT-group compared to none in the ST groups at follow-up. None in the IT-group complained of muscle cramps compared to 2 (29 %) in the ST-group. No infections were seen. One case in the ST group of postoperative stiff shoulder resolved without further surgery.

Conclusion: In this case control series there was no difference in medium to long term outcome comparing intertubercular and subpectoral tenodesis. In both groups the functional limitations were marked prior to operation, but the mean subjective scores improved significantly after the procedure despite some long term consequences of the methods. The major limitations of the study are the lack of randomization, the high drop-out and the uneven follow-up**.**