ARTHROSCOPIC BANKART RECONSTRUCTION USING DIFFERENT ABSORBABLE TACKS

Clinical results, radiographic findings and effect on calcaneal bone mineral

Akademisk avhandling

som för avläggande av medicine doktorsexamen vid Sahlgrenska akademin vid Göteborgs Universitet kommer att offentligen försvaras i Mölndalsaulan, V-huset, Sahlgrenska Universitetssjukhuset/Mölndal, onsdagen den 20 november 2013, kl 09.00 av

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AVHANDLINGEN BASERAS PÅ FÖLJANDE DELARBETEN:

I. A long-term clinical follow-up study after arthroscopic intra-articular Bankart repair using absorbable tacks
Elmlund A, Kartus C, Sernert N, Hultenheim I, Ejerhed L
Knee Surg Sports Traumatol Arthrosc. 2008;16(7):707-12

II. A 7-year prospective, randomized, clinical, and radiographic study after arthroscopic Bankart reconstruction using 2 different types of absorbable tack
Elmlund AO, Kartus J, Rostgård-Christensen L, Sernert N, Magnusson L, Ejerhed L
Am J Sports Med. 2009 ;37(10):1930-7

III. Dislocation arthropathy and drill hole appearance in a mid- to long-term follow-up study after arthroscopic Bankart repair
Elmlund AO, Ejerhed L, Sernert N, Rostgård LC, Kartus J
Knee Surg Sports Traumatol Arthrosc. 2012 ;20(11):2156-62.

IV. Bone mineral decreases in the calcanei after arthroscopic Bankart reconstruction: a prospective study over five years
Elmlund AO, Kartus J, Ejerhed L
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ABSTRACT

The aim of the thesis was to explore the clinical and radiographic results after post- traumatic anterior shoulder instability treated with arthroscopic Bankart surgery using absorbable tacks with different compositions. Further aims were to explore possible effects on bone mineral in the heel bone and health-related quality of life after a shoulder-stabilising surgical procedure.

Study I was a clinical long-term study of 81 patients (84 shoulders) operated on using tacks made of PGA (polygluconate B polymer). The majority of patients had good functional results after eight years, although 18% had recurrent instability. Study II was a randomised, controlled study (RCT) using two different tacks, PGA and PLLA (poly-L-lactate acid polymer), with a clinical and radiographic evaluation after seven years. The drill holes after implanting PLLA tacks (18 patients) had healed to a lesser extent (55% unhealed) than those after implanting PGA tacks (17 patients), (0% unhealed), seven years after the operation. There were no differences between the groups regarding radiographic degenerative findings or functional results. Study III (32 patients, 34 shoulders) was a clinical and radiographic two- and eight-year follow-up after reconstruction using PGA implants. As in Study II, the radiographs were classified with regard to the drill-hole appearance and degenerative changes. In Study III, the radiological degenerative changes increased from no changes preoperatively to 24% mild and 18% moderate degenerative changes eight years postoperatively. In Study IV (23 patients), bone mineral was evaluated using Dual-Energy X-ray Absorptiometry (DEXA) combined with laser measurement in the heel bone preoperatively and until five years postoperatively. Activity level was classified according to Tegner activity level and health-related quality of life was classified with the Euroqol 5-dimension (EQ-5D) instrument. The bone mineral had decreased by 6% in the calcaneus five years after the operation. The activity level did not increase, but the EQ-5D increased after the operation.

Keywords: shoulder dislocation, arthroscopic, dislocation arthropathy, BMA

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