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Double Band Double-Pulley Repair for Articular Surface Partial Tears of the Supraspinatus in Throwing Athletes: Improving the Transtendon Technique

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ABSTRACT
Disabled shoulders of throwing athletes typically present with extended undersurface partial tears of the rotator cuff, which include the posterior supraspinatus and the anterior infraspinatus tendon to a variable extent. We propose a modified transtendon repair technique to adequately treat this subset of patients. The repair includes two double-loaded anchors, at the anterior and the posterior end of the tear, respectively. With the help of an angulated penetrator we create a medial and a lateral band of sutures on top of the cuff, producing a broad contact in the tendon-to-bone interface. All the 9 so far operated patients were young men, 7 of them base-ball pitchers, and 5 active in competitive sports. The Constant Score rose from 72 points preoperatively to 99 points at 12 months follow-up. Three of the still active pitchers were able to return to their previous level in sports after one year. The improved footprint contact of our novel repair construct should allow for better healing and, therefore, a higher chance of return to competition.

KEYWORDS
Partial Tear; Supraspinatus Tendon; Throwing Athlete; PASTA-Lesion; PAINT-Lesion

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