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Comparison between the open and minimally invasive repair techniques in acute Achilles tendon injuries

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ABSTRACT

Objective: Our study compares the functional outcomes of patients who underwent open repair of the Achilles tendon with those of patients treated with the minimally invasive technique using the percutaneous Achilles repair system (PARS) over a 1-year minimum follow-up period and presents the complication rates for the 2 techniques.

Methods: Between 2011 and 2016, 31 patients were reviewed; of these, 20 were included in the study (10 PARS X 10 open repair technique). Patients with chronic Achilles tendon rupture, insertional or bilateral, and patients with a history of surgery or previous ankle pathology that could mask functional outcomes were excluded from the study. The open repair technique was performed via a posteromedial incision to the ankle to repair the tendon and was combined with myotendinous transfer of the flexor hallucis longus tendon, which was fixed with a Biotenodesis screw. The minimally invasive technique was performed using the PARS of the company Arthrex through a small transverse incision at the site of the Achilles tendon rupture. Functional outcomes and complications were collected after at least 1 year of follow-up.

Results: Both groups had similar American Orthopedic Foot and Ankle Society (AOFAS) scores (PARS: 95.3±5.1, open: 96.5±5.1; p=0.604), demonstrating similar functional outcomes. The PARS group had a higher number of complications than the open repair group (PARS: 20% x open: 10%), but the difference was not significant (p=0.383).

Conclusion: For the treatment of acute Achilles tendon injuries, the PARS and open repair techniques had similar functional outcomes after 1 year of follow-up.

Keywords: Rupture; Achilles; Surgical; Complications.

