Chronic Achilles peritendinitis and retrocalcaneal bursitis

Long-term follow-up of surgically treated cases

M. U. K. Lehto, M. Järvinen, P. Suominen
Tampere University Hospital, Department of Surgery, Division of Orthopedics, Tampere, Finland

Abstract. Forty-nine patients with Achilles peritendinitis (APT) (11 bilateral) and 31 patients with retrocalcaneal bursitis (RCB) (5 bilateral) were treated surgically (altogether 96 heels). There were 37 men and 12 women in the APT group, with a mean age of 38.4 years, and 26 men and 5 women in the RCB group, with a mean age of 32.3 years. Forty-five patients in the APT group and 30 patients in the RCB group were active in sports. All patients had been treated conservatively for at least 6 months (range 6 months to 13 years) without relief of symptoms. The operative method was bilateral longitudinal incision of fascia cruris and trimming of the adhesions to fascia and base of Kager’s triangle in APT group, and ablation of the posterior upper corner of os calcaneus in RCB group. In order to assess the ability to return to sports, the healing results were evaluated by questionnaire in 42 patients (47 operations) in the APT group and 25 patients (28 operations) in the RCB group 2–11 years postoperatively. The results were excellent in 27, good in 11, fair in 7 and poor in 2 in the APT group, and excellent in 13, good in 10, fair in 2 and poor in 3 in the RCB group, respectively. Operative treatment of APT and RCB in patients whose symptoms persist after conservative treatment seems to give favourable results in the majority of cases.

Key words: Achilles peritendinitis – Retrocalcaneal bursitis

Introduction

Achilles peritendinitis (APT) and retrocalcaneal bursitis (RCB) are among the most common overuse injuries in athletes [2, 5]. They are often associated with sports that involve a lot of running [1, 2]. The main problem is the limitation of sports activities due to pain without any or only slight restrictions in normal daily activities. Disorders in the biomechanics of the ankle and the foot and the consecutive faults in running have been proposed to be important aetiologic factors in APT [1, 2]. On the other hand, strenuous and rapidly extending training and uphill running or running on hard surface may evoke the development of symptoms [1]. The inflammatory processes are evoked by several repetitions of running episodes and lead to obstructive vascular changes and fibrotic adhesions in the peritendineal tissues [7]. In RCB the prominence of the calcaneus increases the local pressure on the bursa, leading to inflammatory processes and painful swelling on the ventral side of the insertional area of the Achilles tendon [4].

Chronic APT and RCB are most often treated conservatively. However, about one-fourth of the patients whose symptoms in the tendon or its insertion area persist require operative treatment for complete relief [5]. Favourable results of the operative treatment of APT have been reported in several clinical studies [6, 8, 9, 11, 12]. Reports on the operative treatment of RCB are fewer, although satisfactory results have been published [4, 13].

The purpose of the present study was to analyse the results of operative treatment of APT and RCB in cases in which all conservative treatment modalities have failed. Furthermore, the ability of the patients to return to their pre-injury level of training and sports was evaluated.

Patients and methods

Altogether 49 patients, 37 men and 12 women, were operated on due to chronic APT. In 5 patients the operation was bilateral, and in 6 patients both sides were operated on at different occasions. There were thus altogether 60 APT operations. The mean age in the APT group was 38.4 years (range 16–63).

Thirty-one patients were operated on because of RCB, 26 men and 5 women. In 2 patients the operation was bilateral, and in three patients both sides were operated on at different occasions. There were thus altogether 36 RCB operations. The mean age in the RCB group was 32.3 years (range 17–56).

There were no patients operated on for both APT and RCB, and none of the patients had a history of acute trauma. The age and sex distribution of all APT and RCB patients operated on in the Tampere University Hospital during 1980–1988 is presented in Fig. 1.
There were 45 patients active in sports pre-operatively in the APT group and 30 in the RCB group. The distribution of the patients according to different levels of sports is presented in Table 1. The great majority of patients in both groups were runners: 23 in the APT group and 19 in the RCB group. Other sport events represented were: cross-country skiing in 10 APT and 4 RCB patients, soccer in 2 APT and 3 RCB patients, other ball games such as basketball, volleyball, Finnish baseball, tennis and squash in 5 APT and 1 RCB patients, respectively. There were also individuals in sports like ice hockey, bicycling, gymnastics, dancing and karate in both patient groups. Four patients in the APT group and 1 in the RCB group were inactive in sports. The aetiology in one case in the APT group was gout, and in one patient elongation of the Achilles tendon had been performed previously. The remaining three patients had suffered overexertion at work.

In all of the patients conservative treatment including anti-inflammatory drugs (NSAID), local corticosteroid injections, heel lift, stretching of the calf muscles and physiotherapy had been carried out pre-operatively for at least 6 months without persistent satisfactory results. The duration of symptoms with local swelling of the affected tissues and chronic pain on exertion in the APT group was from 6 months to 2 years in 37 patients and in the RCB group in 21 patients; for the remaining patients the duration of symptoms was from 2 to 15 years in both groups.

The indication for operative management was the inability to continue sports activities without disturbing pain and local swelling in the Achilles tendon area in the APT group, and in the insertion area in the RCB group. In both groups the diagnosis was based on thorough clinical examination and patient history as well as on ultrasound and X-ray examinations. In APT patients the ultrasound examination usually revealed oedema in the peritendineal tissues, but occasionally there was also evidence of intratendineal degeneration. In RCB patients ultrasound examination revealed swelling or hypertrophy of the retrocalcaneal bursa. On X-ray examination only in the RCB patients was a prominent posterior upper corner of the os calcaneus seen, whereas in the APT patients no abnormalities were observed.

**Operative technique**

The operative technique in the APT group involved longitudinal incision of the crural fascia on both sides of the Achilles tendon and trimming of the adhesions to fascia and base of Kager’s triangle (Fig. 2). In patients with intratendineal pathological processes (found on ultrasound examination and/or perioperative palpation of a nodule-like hypertrophy), a longitudinal division of the tendon was performed, and the degenerated focus was removed for histological or immunohistological studies previously developed by our research group [7]. There were altogether four patients with intratendineal pathology: two mucoid degeneration, one tendolipomatosis, and one calcifying tendinopathy.

In the RCB group the posterior upper corner of calcaneus and the hypertrophied bursa were removed (Fig. 3). In both groups the ankle joint was postoperatively mobilised and partial weight-bearing started with the aid of crutches. The patients used crutches after the operation until they were able to walk.