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Original article

Clinical results of endoscopic treatment without repair for partial thickness gluteal tears

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ABSTRACT

Introduction: Various surgical treatments have been proposed for greater trochanteric pain syndrome (GTPS) related to gluteal tendinopathy with partial thickness tears. The clinical results of endoscopic debridement without repair of these gluteal tears are not well known. The objectives of this study were to determine if this procedure leads to: (1) reduction of pain, (2) functional improvement, (3) patient satisfaction (on scale of 0 to 10).
Hypothesis: Endoscopic treatment without tendon repair provides short-term pain relief in patients with GTPS due to partial thickness gluteal tears.
Material and methods: Seventeen patients (16 women, 1 man) with GTPS due to partial thickness gluteal tears that was present for at least 6 months and was refractory to conservative treatment were included in the analysis. The average age at the time of the procedure was 53.5 years (17–71). Pain was evaluated with a visual analogue scale (VAS). Functional outcomes were defined using the Harris Hip Score and the UCLA activity score. Satisfaction was evaluated using a VAS and Odom's criteria.
Results: The average follow-up was 37.6 months (12–48). The average preoperative and follow-up values were respectively: (1) Pain: 7.2 ± 1.1 (5–9) versus 3.3 ± 1.9 (1–7) ($P < 0.001$), (2) Harris score: 53.5 ± 8.4 (36–68) versus 79.8 ± 14.7 (45–96) ($P < 0.001$). Seven patients (41.2%) were able to resume sports activities. The average satisfaction score for the surgery was 6.2 ± 2.4 (0–9) at follow-up. Five patients had a poor outcome at the review: four still had pain and one had recurrence of the lateral snapping hip.
Conclusion: Endoscopic treatment without repair of partial thickness gluteal tears is a treatment option with modest clinical results for GTPS patients refractory to conservative treatment.
Level of evidence: IV, retrospective study.

1. Introduction

Greater trochanteric pain syndrome (GTPS) is a generic term encompassing lateral hip pain conditions that primarily affect middle-aged women (40–60 years) [1,2] with an estimated incidence of 1.8/1000 [3]. Although it has previously been attributed to bursal inflammation, this pain syndrome appears to have other causes [4]. Gluteal tendinopathy could be one of the causes of GTPS [5]. In an MRI study of recurrent GTPS, Bird et al. [6] found a complete gluteus medius tear in 46% of cases and a partial tear in 38%.

Most patients with GTPS respond well to conservative treatment [7,8]. The initial treatment consists of rest, non-steroidal anti-inflammatory agents, physiotherapy and rehabilitation. Secondary treatment measures consist of corticosteroid injection in the bursa, shockwave therapy and more recently, platelet-rich plasma (PRP) injections. When these conservative treatments fail, various surgical treatments are possible [8,9].

Open or endoscopic repair of full thickness tears seems to be the rule; the goal is to restore the distal attachment of the gluteal tendons and to promote tendon-bone healing [10,11]. For cases of gluteal tendinopathy with partial thickness tears (PTGT), a repair-based treatment requires incision of the gluteal muscles, which would aggravate the pre-existing lesion. Some authors have proposed endoscopic debridement for PTGT [12], but no study has specifically evaluated the clinical outcomes of this type of PTGT treatment.

We hypothesized that endoscopic treatment without tendon repair will provide short-term pain relief in patients with GTPS due to PTGT. The objectives of this retrospective study were to determine whether:

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- reduction of pain;
- functional improvement;
- and patient satisfaction (on scale of 0 to 10) were obtained.

2. Material and methods

2.1. Patients

The diagnosis of GTPS related to PTGT was made based on a body of evidence:

- clinical findings: lateral peritrochanteric pain, positive Lequesne sign (pain during resisted external derotation with the hip flexed 90°);
- diagnostic testing: partial or complete reduction of pain after ultrasound-guided corticosteroid injection of the bursa;
- imaging (ultrasonography or MRI) findings: peritrochanteric bursitis, tendinopathy of gluteus medius and/or minimus (Fig. 1).

Radiographs were used to look for trochanteric calcification of the gluteal enthesis and to rule out intra-articular pathology.

All of the included patients were refractory to least 6 months of conservative treatment that consisted of physiotherapy, multiple bursal injections (corticosteroids and/or PRP) and shockwave therapy. We included 17 patients (16 women, 1 man) presenting with GTPS related to PTGT who were treated surgically by endoscopic debridement and had at least 1 year of follow-up.

This was a retrospective continuous study of patients operated between January 2010 and January 2014 at the Médipole-Garonne clinic in Toulouse, France. All the surgical procedures were carried out by the same surgeon (O.M.). This study was approved by the clinic's Institutional Review Board.

The mean age at the time of the procedure was 53.5 ± 13.8 years (17–71). The average duration of preoperative symptoms was 2.9 ± 1.8 years (0.5–9). The average follow-up was 37.6 ± 10.4 months (20–62).

2.2. Surgical technique

All patients were treated using the same surgical technique. They were placed in lateral decubitus on the side opposite to the injured side. Pubic and sacral posts were used to stabilize the pelvis. The leg on the operated side was held by two pads so as to place the hip in 20° abduction and release the iliotibial band. The hip was internally rotated slightly to unroll the greater trochanter. The entire leg was draped so that it could be moved as needed during the procedure.

The scope was placed in the middle anterior portal typically used for hip arthroscopy. Subcutaneous dissection was performed carefully to spare the sensory branches of the lateral cutaneous nerve of the thigh. A trocar was introduced in a posterior direction towards the space between the iliotibial band and the greater trochanter. Sweeping movements were used to palpate the contours of the greater trochanter. A 70° scope was aimed distally to locate the vastus ridge of the vastus lateralis and the trochanteric bursa. An accessory lateral instrument portal was made distal to the tip of the greater trochanter, after being located with a needle over the quadrate tubercle of the vastus lateralis.

The appearance of the bursa was evaluated (Fig. 2), and then it was resected using a radiofrequency probe and shaver. The gluteal medius and minimus muscles were evaluated after the proximal bursectomy. A probe was used to confirm that the enthesis

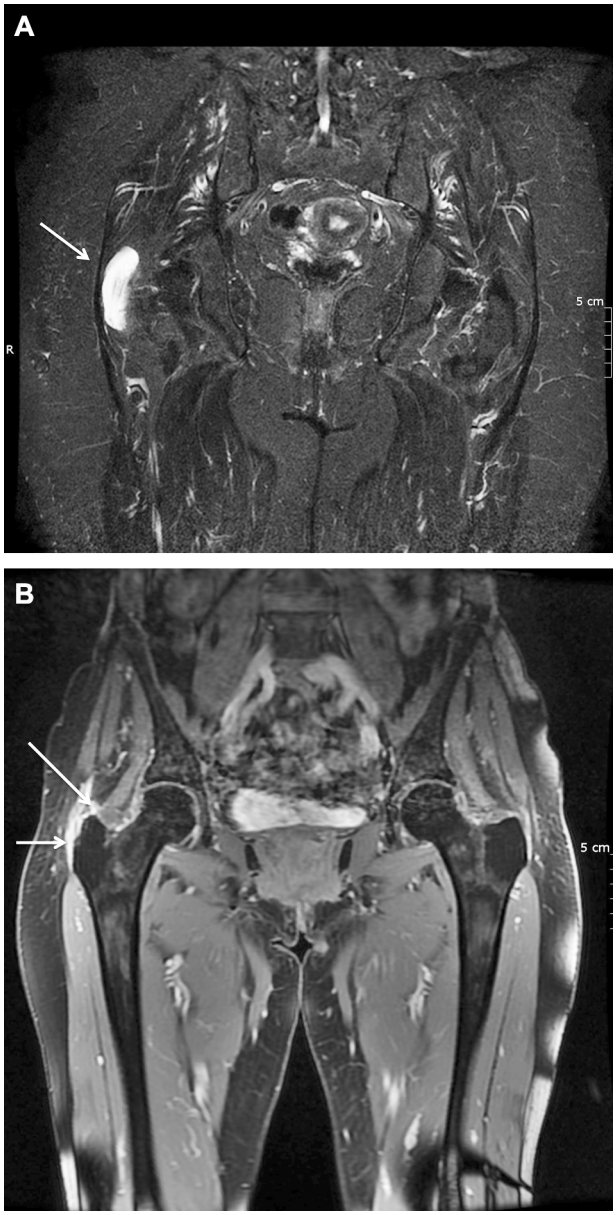

Fig. 1. MRI of pelvis confirming greater trochanter pain syndrome: pretrochanteric bursitis (A) with gluteal muscle tendinopathy (B).

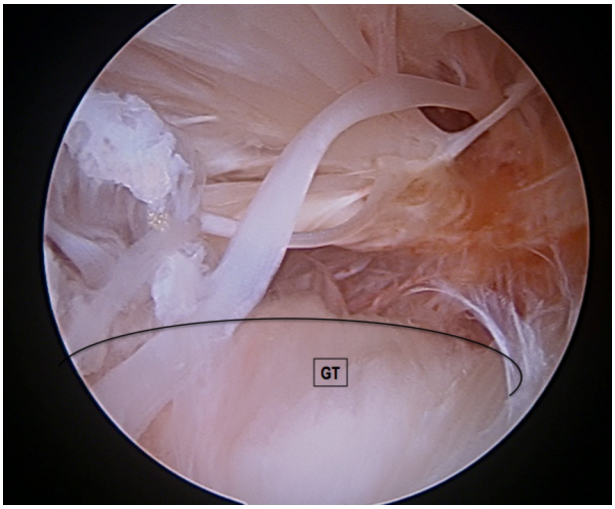

Fig. 2. Endoscopic view of inflammatory pretrochanteric bursitis. (GT: greater trochanter).