

# Arthroscopic Prepatellar Bursectomy

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## Abstract

A 24 year old cabinet maker presented with a history of bilateral chronic prepatellar bursitis. Excision of the bursae was performed arthroscopically using a chondrotome. A full postoperative recovery was made without complications or pain on kneeling. We present the case report, surgical technique and literature review.

## INTRODUCTION

Chronic prepatellar bursitis is a common condition often affecting people whose occupation involves kneeling. Repetitive trauma causes thickening of the bursal lining and fluid formation. If the patient has persistent symptoms despite non-operative treatment, surgical intervention is warranted. Open excision of the pre-patellar bursa has been described using a longitudinal incision, however, complications of this procedure include wound haematoma, injury to the infrapatellar branch of the saphenous nerve and scar discomfort.<sup>1</sup>

We present the case of a patient with bilateral chronic prepatellar bursitis and the surgical technique of arthroscopic prepatellar bursectomy.

## PATIENT AND METHOD

A 30 year old cabinet maker presented with a 6 week history of an uncomfortable swelling over the anterior aspect of the right knee. His occupation involves periods of kneeling, but he had initially noticed the swelling after a game of football. The swelling had failed to resolve following aspiration on three occasions. The bursa was excised arthroscopically and the swelling resolved with no postoperative complications. The patient returned to his normal activities within six weeks and had no pain on kneeling.

Five years later he returned with a similar problem affecting the left knee. He had a fluctuant prepatellar swelling with palpable areas of thickened fibrous tissue which were painful to kneel on. It was again elected to perform arthroscopic bursal excision, which resolved the swelling without complication and allowed a full return to his occupation and sporting activities.

The procedure was performed under general anaesthesia with the limb tourniquet inflated to 350mm Hg following exsanguination using an Esmarch bandage. The bursa was infiltrated with 20mls of normal saline. Portal incisions were made at the inferolateral and inferomedial boundaries of the bursa (Figure 1) and a blunt trocar was inserted into the inferolateral portal in a sheath with two connection taps. Inserting the arthroscope in this position allows visualisation of the entire bursa and incisions made obliquely through the skin and subcutaneous tissues prevent extravasation of fluid.

A 5.0mm arthroscope was inserted into the sheath and a gravity-fed one litre bag of 0.9% saline was attached via a length of tubing to the connection tap. A constant flow of fluid was maintained throughout the procedure to keep the bursa distended. A length of suction tubing was sectioned and connected using a T-piece both to the other connection tap on the sheath and to the chondrotome hand piece.

The internal surfaces of the bursa were examined and some areas of thickened fibrous tissue were identified (Figure 2). These were excised using a 4.2mm straight chondrotome introduced via the inferomedial portal (Figure 3). The chondrotome was then used to excise all surfaces of the lining of the bursa (Figure 4). The instruments were changed over in the portals to allow the complete excision of the bursal lining.

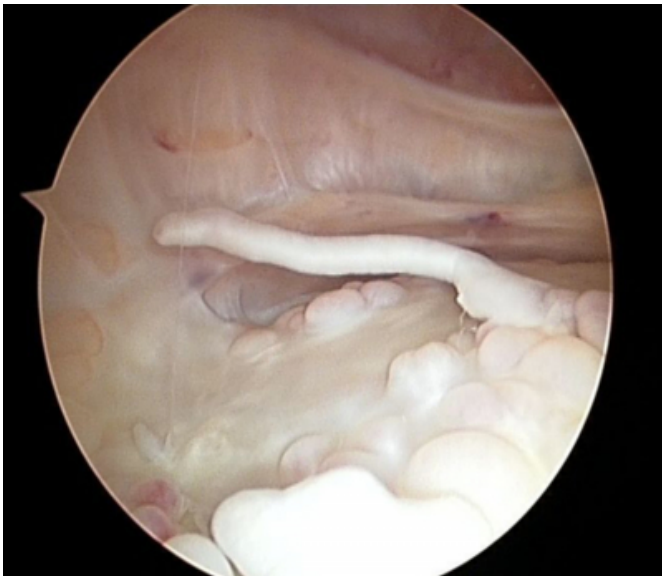
**Figure 1**

Figure 1: Portal Position for Arthroscopic Prepatellar Bursectomy



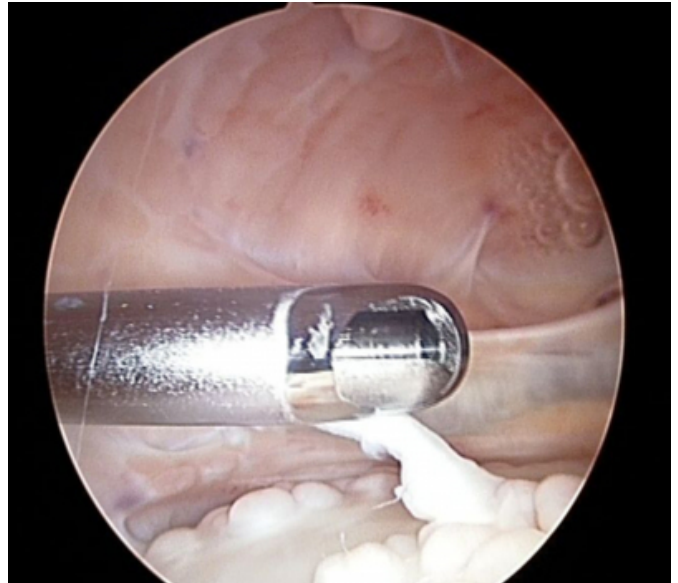
**Figure 2**

Figure 2: Thickened Fibrous Tissue within the Prepatellar Bursa



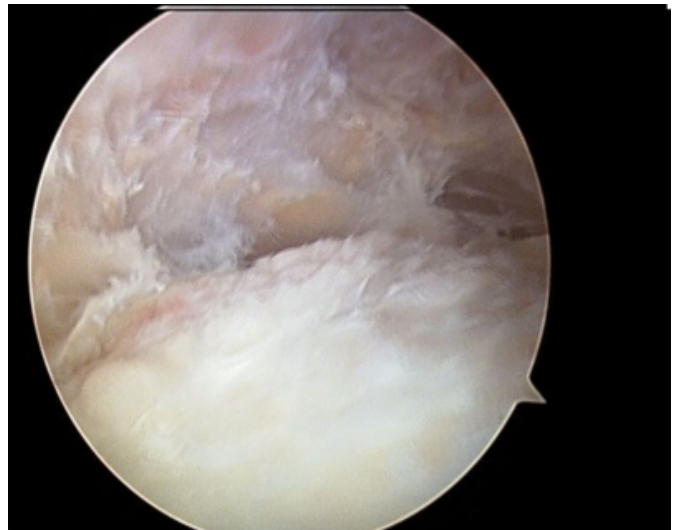
**Figure 3**

Figure 3: The Use of a Chondrotome for Excision of Fibrous Tissue and Bursal Lining



**Figure 4**

Figure 4: The Bursa after Excision of the Lining



The bursa was drained of fluid and the wounds were sutured using a non-absorbable suture and dressed with an adhesive dressing. A wool and crepe bandage was applied firmly for two weeks. The patient was allowed to fully weight bear and mobilise within the limits of comfort.

### DISCUSSION

We present a simple procedure for arthroscopic prepatellar bursectomy which may avoid the complications associated with an open procedure. Kerr and Carpenter reported a series of three patients who underwent arthroscopic prepatellar

bursectomy using a three portal technique.<sup>2</sup> They described good results for two patients with traumatic bursitis, but a poor result for a third patient with CREST syndrome who had tethering of the skin to the quadriceps tendon and residual calcium deposition within the bursa.

Ogilvie-Harris and Gilbert reported a series of 19 patients with prepatellar bursitis.<sup>3</sup> They describe a procedure for arthroscopic prepatellar bursectomy using medial and lateral portals positioned 1 centimetre distal to the bursa. 17 patients experienced complete symptomatic resolution and there was one recurrence in a patient who was a tile setter at nine months postoperatively.

Kaalund et al described endoscopic resection of the septic prepatellar bursa in four patients using two lateral portals.<sup>4</sup> They described resolution of the bursa and the infection in all cases with no complications. This procedure has,

however been implicated in the progression of septic prepatellar bursitis to necrotising fasciitis in one case report.<sup>5</sup>

Arthroscopic prepatellar bursectomy is a simple procedure which is effective and has a low complication and recurrence rate.

### References

1. Quayle JB, Robinson MP. An operation for chronic prepatellar bursitis. *J Bone Joint Surg[Br]* 1976;58-B:504-6.
2. Kerr DR, Carpenter CW. Arthroscopic resection of olecranon and prepatellar bursae. *Arthroscopy* 1990;6:86-8.
3. Ogilvie-Harris DJ, Gilbert M. Endoscopic bursal resection: the olecranon bursa and prepatellar bursa. *Arthroscopy* 2000;16:249-53.
4. Kaalund S, Breddam M, Kristensen G. Endoscopic resection of the septic prepatellar bursa. *Arthroscopy* 1998;14:757-8.
5. Schlesinger NH, Friis-Moller A, Hvolris J. Necrotizing fasciitis after arthroscopic synovectomy of an infected prepatellar bursa. *Ugeskrift for Laeger* 2007;169:1693-5.

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