CASE REPORT

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Symptomatic bucket handle tear of the lateral meniscus after knee arthroplasty

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Abstract We report on a 67-year-old women who had pain after a knee arthroplasty in the region of the lateral meniscus. The arthroscopy showed the remainder of the posterior horn of the lateral meniscus, which luxated as a bucket handle tear into the joint. The resection led to an immediate relief. This case show the importance of meticulous removal of the entire menisci during bicondylar surface replacement.

Résumé Après l'implantation d'une prothèse de genou une femme, âgée de 67 ans, souffrait d'une douleur sur la partie laterale de genou, dans la région du menisque. L'arthroscopie montrait une partie du menisque postérieur, qui était situé entre les deux composants de la prothese. Après la résection du menisque la douleur avait immédiatement disparue. Ce cas souligne l'importance d'une résection exacte du menisque entier dans la technique opératoire d'une prothese de genou.

Introduction

Implantation of a joint replacement regularly leads to rapid relief of discomfort [5]. Only occasionally vague aches persist postoperatively, which despite of stable ligament control, straight leg axis, good range of movement and radiologically correct implantation remain unexplained and have to be attributed to the soft tissues.

Only rarely does postoperative pain equal preoperative discomfort. We report on the case of a patient who complained of equal discomfort pre- and postoperatively. She showed signs and symptoms of a lateral meniscus

lesion with additional occasional locking of the affected knee.

Case report

A 67-year-old female patient had a bicondylar replacement of the Miller-Galante II type inserted in the right knee joint 1 year ago. Pain on weight bearing was thereby improved. Furthermore, the patient complained of symptoms typical for a lesion in the posterior horn of the lateral meniscus. There was pain on flexion over 90° combined with clicking sensations and occasional locking.

On clinical examination she had a straight leg axis, stable collateral and posterior cruciate ligaments and a range of movement 100/5/0° for flexion/extension. The McMurray test revealed clicking and corresponding pain in the postero-lateral part of the knee joint.

Arthroscopy was performed 1 year after knee arthroplasty. A bucket handle tear of part of the posterior horn of the lateral meniscus, which had not been entirely removed, was demonstrated. The bucket handle tear impinged between the femoral component and the polyethylene tibial plateau at flexion above 90° (Fig. 1). After arthroscopic removal using shaver and punch a stable meniscus rim remained, which did not show any tendency of dislocation (Fig. 2). The patient remained free of complaints 1 year postoperatively and signs of locking did not recur.

Discussion

Damage to blood vessels or nerves are typical intra-operative complications of knee arthroplasty [1,2]. Also, fractures of the distal femoral shaft [4] and problems with the patella [3] are recognized postoperative complications. Wigren reported on four asymptomatic newly formed menisci after knee arthroplasty, which were found on re-operation after further trauma [7]. Recently

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Fig. 1 Bucket handle tear of the posterior horn of the lateral meniscus (*top* metallic femoral component, *bottom* polyethylene tibial plateau)

Fig. 2 Stable meniscus rim after resection of the posterior horn of the lateral meniscus

Scher reported on a symptomatic pseudo-meniscus following knee arthroplasty, which was successfully treated arthroscopically [6].

In our case we found the remains of a posterior horn of a lateral meniscus, which had been left in situ and dislocated inward like a bucket handle tear and thus lead to recurrent pain and locking (Fig. 1). Since discomfort and locking occurred soon after the knee arthroplasty we cannot assume re-formation of a pseudomeniscus as described by Scher [6], but have to recognize this as a part of the posterior horn of the lateral meniscus, left in place. Transarthroscopic resection lead to immediate pain relief and locking did not occur again (Fig. 2).

This case demonstrates, that in bicondylar surface replacement meticulous removal of the entire menisci is necessary as well as preservation of the collateral ligaments in order not to cause symptomatic locking sensations.

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