Semimembranosus tendonitis after total knee arthroplasty

Good outcome after surgery in 6 patients

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ABSTRACT More than 700 total knee arthroplasties were performed in our Department between 1992–2000. 6 patients developed pain on the postero-medial aspect of the knee, within 1 year of surgery. The pain increased during walking and especially on rising from a chair. All patients were women with good knee motion and good alignment of the implanted prosthesis. We found no signs of low-grade infection. Injection of 1% Xylocaine relieved pain for a short time in all patients. They were all treated with excision of the reflected portion of the semimembranosus tendon which was not cut during the arthroplasty. Pain was completely relieved in 5 cases and improvement occurred in 1.

Friction of the reflected portion of the semimembranosus tendon at its entrance to the groove below the postero-medial joint line of the knee may cause postero-medial knee pain (Halperin et al. 1987). No consensus exists as to whether the reflected portion of the semimembranosus tendon should be excised during medial exposure and release of a varus knee when performing a knee replacement. Insall and Easley (2001) recommended stripping the semimembranosus off the postero-medial aspect as one way of improving exposure, which permits greater external rotation and easy eversion of the patella. However, in an unfixed deformity, the tendon should be left intact because it provides dynamic stability. Our method is to excise the tendon only in cases of fixed deformity and difficult exposure.

Patients and methods

Between 1992 and 2001, about 700 total knee arthroplasties were performed in our department. 6 patients developed pain on the postero-medial aspect of the knee, 3–13 months postoperatively. Pain increased during walking and on getting up from a chair. The overall clinical results were good, using the American Knee Society Score, improving from an average of 52 preoperatively to an average of 83. The average preoperative femuro-tibial angle was 10º varus, improving to 6º valgus. All patients were tender on palpation of the postero-medial aspect of the knee. Injection of 5 cc of 1% Xylocaine, temporarily relieved pain in all patients.

The patients were operated on under spinal anesthesia. All operations were performed through

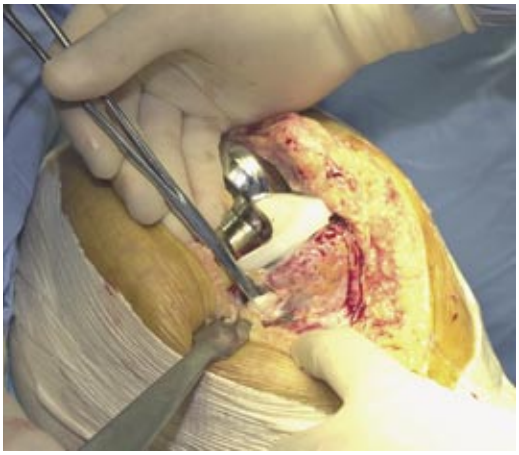

Figure 1. Semimembranosus tendon during exploration.

Figure 2. Typical osteophytes of the semimembranosus groove.

the same straight incision as the original operation with medial arthrotomy, since we wished to evaluate all components of the prosthesis. The reflected head of the semimembranosus was explored under the medial joint line at the posterior medial corner and detached completely (Figure 1). In 1 patient we also resurfaced the patella. No other pathology was found during the operation.

Completely relief of pain was obtained in 5 patients while one complained of mild pain. This was the patient with a resurfaced patella. The follow-up was 1–8 years.

Discussion

Semimembranosus tenosynovitis may occur in elderly patients, especially women (Halperin et al. 1987). Knee movements against the posteromedial edge of the knee may cause friction on the tendon. The correction of a varus deformity during knee arthroplasty to valgus position can induce more tension on the tendon, thereby causing tendonitis and pain during walking and rising from a chair.

Although excision of the tendon is not mandatory in unfixed deformities, we prefer to excise the tendon in all cases of knee arthroplasty with varus deformity, especially if preoperative radiographs show osteophytes on the border of the semimembranosus groove (Figure 2). Release of the tunnel and lengthening of the tendon may also be considered, because the tendon is important for knee stability.

No competing interests declared.

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