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MENISCECTOMY

A Comparison of Two Series Treated as Outpatients and Inpatients

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A total of 129 patients were operated on for meniscus lesion in the knee joint. Of these, 64 were operated as outpatients and 65 as inpatients. The outpatients reported to the operation department in the morning and left the hospital in the evening of the same day, after the operation. The inpatients were admitted to the hospital the day before the operation and were discharged 1–3 days after the operation.

Objective postoperative findings, sick-leave periods and the number of visits to the outpatient clinic show no differences between the groups. The end result in the two groups is the same.

This investigation also shows that it is possible to operate on patients with meniscus injury as outpatients without increased discomfort for the individual and without medical risks. Thus expensive nursing resources are released for other groups requiring more nursing care.

Key words: knee joint; meniscus; operation; treatment

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Patients operated on for meniscus injury require a considerable number of bed-days annually at orthopaedic surgical clinics. According to the literature, the nursing period varies from 3 days to 3 weeks (Smillie 1962, Helfet 1963, McGinty et al. 1977). The patient is usually admitted on the day before operation and discharged 1 to 4 days after.

In order to reduce the load on the nursing departments, we began, in 1974, a policy of operating on, as outpatients, specially chosen patients with meniscus injury. Healthy men 20 to 40 years of age with a clinically and arthrographically verified meniscus injury were usually chosen for outpatient operation. All lived within 30 minutes travelling time from the hospital. It was soon realized that operated outpatients managed just as well as inpatients. Therefore outpatient operation was extended to other age groups.

The object of this study was to determine whether the outpatient operation increased the medical risk and the subjective discomfort of the patients.

PATIENTS AND OPERATIVE PROCEDURE

The study involved 129 patients: 94 men and 35 women. All those operated on as outpatients were studied during a definite period. A control series with the same age range was randomly chosen from among the operated inpatients.

Sixty-four were operated on as outpatients; 65 as inpatients. Table 1 gives the age and sex distribution. There was no statistical difference between the two series ($Chi^2 = 2.53$ and 2.73).

All patients were examined one or more times in the outpatient clinic before the operation. All were X-rayed to exclude skeletal changes. Only half of them (62 patients) underwent arthrography: 35 inpatients and 27 outpatients. At the

Table 1. Age and sex distribution.

Age	Male		Female	
	Outpatients	Inpatients	Outpatients	Inpatients
< 20	5	6	2	4
21–30	15	11	5	3
31–40	14	14	7	6
41–50	9	11	2	5
> 51	5	4	0	1

There are no significant differences between the number of patients in the respective age groups (male group $Chi^2 = 2.53$, d.f. = 4, $P > 50$ per cent, female group $Chi^2 = 2.73$, d.f. = 4, $P > 50$ per cent).

preoperative examination, all were informed about the nature of the injury and of the proposed operation and postoperative treatment. In each group, 46 patients (2/3) were given detailed written and verbal information as to the nature of the injury and treatment including postoperative instruction. Sedimentation rate and Hb-value were checked and blood grouping was done.

The cause of injury was games or sports in 44 cases while 28 patients referred to some other cause, and 54 could not recall any trauma. No difference existed in the distribution of traumatic and non-traumatic injuries between the two groups. Also concerning games and sports, the difference between the groups was insignificant (39 operated outpatients and 30 operated inpatients).

Those operated on as inpatients were admitted to the hospital the day before the operation for normal preoperative examination. They were usually discharged 1–3 days after the operation.

Those to be operated on as outpatients reported to the operation department in the morning and there underwent a final preoperative appraisal by the operating surgeon. After the operation, the patient was kept under observation for 4 to 6 hours and was allowed to leave the hospital after examination by the surgeon. Only one of them asked to be admitted to the nursing department because of considerable pain in the operated knee.

The majority of the patients in the two groups were operated on under epidural anaesthesia, the rest under general anaesthesia.

Except for 14 who were followed up by another doctor, all patients were checked after the operation at our clinic, irrespective of whether they were treated as outpatients or inpatients.

Of the total number of cases, five outpatients and seven inpatients had a concomitant injury to the anterior cruciate ligament and 21 and 18 patients, respectively, showed signs of chondromalacia patellae. Nothing was done about these conditions in connection with the operation.

POSTOPERATIVE FOLLOW-UP

Thirty-two outpatients and 34 inpatients experienced the first days at home as troublesome. Thus there was no difference between the two groups despite the fact that the inpatients had spent 1 to 3 days in hospital after the operation.

During their first days at home 32 outpatients and 25 inpatients needed help from members of their family, and 39 and 35, respectively, took pain-relieving tablets. Thus there was no significant difference between the two groups in this respect either.

When leaving hospital, the patients were given crutches and instructed to use them as long as they found it necessary; otherwise, they were allowed unrestricted use of the knee. Nineteen outpatients and 16 inpatients used the crutches for less than 5 days, and 50 and 46, respectively, for less than 2 weeks.

Of the 39 outpatients and 30 inpatients who took part in games and sports before the operation, 27 and 20 patients, respectively, continued to do so after operation. The practice was usually resumed 7 to 12 weeks after the operation. There was no difference between the two groups.

Table 2 shows the postoperative sick-leave period. There is no significant difference between the two groups. Thus, 45 days after the operation, 39 outpatients and 42 inpatients were back at work. The seven patients in each group who were on sick-leave for more than 76 days had, apart from meniscus injury, also other changes in the knee joint, such as cruciate ligament injury or chondromalacia patellae.

Table 3 shows the number of visits to the outpatient clinic after the operation. Fourteen patients, however, were advised to report to their local doctor. Patients who reported more than three times usually belonged to the group of multiple lesions and they had the longest period of incapacity to work.

All patients were told that they should im-

Table 2. Postoperative sick-leave period in days

Days	No. of outpatients	No. of inpatients
0–15	8	8
16–30	10	17
31–45	21	17
46–60	12	12
61–75	4	3
>76	7	7
No information	2	1

There are no significant differences between the two groups ($Chi^2 = 2.35$, d.f. = 5, $P > 50$ per cent).

Table 3. Number of postoperative visits.

No. of post-operative visits	No. of outpatients	No. of inpatients
0	6	8
1	27	27
2	21	16
3	5	6
4	1	2
5	2	4
6	2	2

There are no significant differences between the groups ($Chi^2 = 2.35$, d.f. = 5, $P > 50$ per cent).

mediately visit the casualty department if they suffered any discomfort. During the first postoperative week, none of the inpatients and only three of the outpatients did so. Two of the outpatients visited the casualty department because of minor discomfort, which required no medical treatment. A 27-year-old man operated as an outpatient called 7 days after the operation with a deep venous thrombosis in the lower leg. This was treated successfully in the hospital with complete recovery. None of the inpatients required readmission for an acute condition. The case of deep thrombosis was the only postoperative complication in the entire series.

Only 31 patients in each group considered that they were completely recovered 6 months after the operation. Apart from a few exceptions, those who did not consider themselves fully recovered thought that their condition did not justify a visit to the doctor. The patients who were still being treated after 6 months belonged to the group with operative findings other than meniscus injury.

DISCUSSION

A comparison of operated outpatients with operated inpatients shows that there are no significant differences between the groups as regards the postoperative course. Both groups experience the first days at home as troublesome, and objective parameters, such as the period of incapacity to work and the number of visits to the outpatient clinic, show slight or no differences. The only postoperative complication, the case of deep lower leg thrombosis, has no connection with the outpatient surgical procedure as such. Most essentially the end result in the two groups is the same.

When treating patients with meniscus injuries with outpatient surgery the crucial point is to secure a safe and relevant aftertreatment. In our opinion this can be done only by a careful verbal and written communication which entails that the patient achieves a true understanding of what the lesion and the surgery is about and most important of all how he is to perform relevant training of his knee extensors without provoking an undue synovial irritation of the knee joint.

All those who are to be operated on as outpatients should have the clinical diagnosis confirmed as an isolated meniscus injury, without concomitant lesions to the crucial ligaments. Usually these combined lesions produce instability symptoms and in such cases more detailed evaluation, either arthrography or arthroscopy, is needed. The most benign and symptomless cases of anterior cruciate rupture found in the present series obviously do not need surgical treatment.

The study shows that a considerable number of the patients need some help at home during the first days after the operation. It is therefore inadvisable to operate on as outpatients those who live alone and lack immediate help from another person.

The advantage of meniscus operation as an outpatient procedure is perhaps the release of expensive nursing resources for others who require more nursing care. Annually around

150 patients are operated for meniscus lesions at our clinic. Of these, almost half are operated as outpatients, i.e., about 225 to 300 bed-days are released for other groups of patients. If we consider the patient's social situation, that is to say, whether or not he lives alone, we think that without increased discomfort for the patient and without increased medical risks it is possible to operate on a large group of patients with meniscus injury as outpatients.

REFERENCES

Helfet, A. S. (1963) *The management of internal derangements of the knee.* J. B. Lippincott Co., Philadelphia.

McGinty, J. B., Geuss, L. F. & Marvin, R. A. (1977) Partial or total meniscectomy. A comparative analysis. *J. Bone Jt Surg.* **59**-A, 763–766.

Smillie, I. S. (1962) *Injuries of the knee joint.* 3rd ed., The Williams and Wilkins Co., Baltimore.

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