Arthroscopic resection of meniscal flaps of the knee

Olav Reikerås

We describe the results of arthroscopic partial resection of isolated flap tears of the menisci in 37 patients who were randomly selected for review from the hospital records. The results were compared with those in a control group of 39 patients that underwent diagnostic arthroscopy during the same period. The follow-up of the patients after 1 to 2 years was based on a questionnaire. The patients with resected flap tears did better than the controls, who usually suffered from minor degenerative changes of the knee joint. However, the flap-tear patients with otherwise usually normal arthroscopic findings often continued to have discomfort and failed to gain a normal Lysholm score.

Nearly half of meniscal lesions are flap tears (Northmore-Ball and Dandy 1982, Lereim et al. 1986). We report the results of endoscopic partial resection of this type of lesion.

Patients and methods

During the 2-year period 1985–86, we performed 213 outpatient arthroscopic knee interventions under local anesthesia; about equal numbers were diagnostic and meniscectomies, whereas 5 percent were other arthroscopic surgery. From this material, 42 outpatients who had had resection of medial (n 28) or lateral (n 14) meniscal-flap tears were randomly selected from the hospital records – 26 males and 16 females with a mean age of 37 (18–70) years. In the medial meniscus, 23 flaps were posterior and five were anterior; nine lateral flaps were posterior and five were anterior.

From the same material a control group of 42 patients who had had only diagnostic arthroscopy were randomly selected – 28 males and 14 females with a mean age of 34 (16–66) years. The arthroscopic diagnoses of the control patients were normal knee (n 14), chondromalacia (n 12), arthrosis (n 6), old ligamentous injuries (n 4), and others (n 6).

A questionnaire was sent to all the patients 1–2 years after the arthroscopy. Function was graded according to a modified scale of Tapper and Hoover (1969) and according to Lysholm and Gillquist (1982). Follow-up was performed in 37 operated on patients and in 39 controls; 5 and 3 patients, respectively, were excluded from the analysis because they failed to respond adequately.

Orthopedic Service, Department of Surgery, Ullevål University Hospital, N-0407 Oslo 4, Norway

Results

The functional end results are given in Table 1. Before arthroscopy the mean Lysholm score of the operated on patients was 48 ±19 and of the control group 50 ±17 (Table 2). At follow-up the scores were 75 ±21 and 60 ±22, respectively.

Table 1. Follow-up results in 37 patients after arthroscopic partial resection of flap tears of the menisci and in 39 control patients after diagnostic arthroscopy (according to Tapper and Hoover 1969)

	Patients	Controls
Good	18	7
Fair	10	6
Poor	9	26

Table 2. Scoring table (according to Lysholm and Gillquist 1982) of the knee function before arthroscopic partial resection of flap tears of the menisci in 37 patients and before diagnostic arthroscopy in 39 control patients and at follow-up. Ninety-five points indicate normal knee function

Score	At arthroscopy		At follow-up	
	Patients	Controls	Patients	Controls
0–9	0	0	0	0
10–19	4	2	0	2
20–29	4	2	0	2
30–39	4	5	1	2
40–49	3	6	0	3
50–59	13	11	8	11
60–69	6	10	6	9
70–79	1	1	1	1
80–89	2	1	2	1
90–95	0	0	17	7
Total	37	39	37	39

Discussion

Results after excision of flap tears are inferior to those with bucket-handle tears (Northmore-Ball and Dandy 1982), and there is doubt about the clinical relevance of isolated flap tears of the menisci. In the present study, all of those in the patient group had an isolated flap tear of the meniscus without other knee injuries or instability. At follow-up there was a general improvement in knee function, but many patients continued to have some discomfort. It is possible that smaller flap tears, which we considered to be of no clinical importance, were unrelated to the symptoms of some of the patients.

Most of the patients in the control group had no clear-cut pathology seen by arthroscopy, and their low prearthroscopy score was possibly related to minor degenerative changes found in many of them. The control patients were only slightly improved at follow-up as compared with the operated on patients. However, one can wonder why the knees were not restored to normal following arthroscopic resection of a single-flap tear. The explanation may be, as suggested by Sprague (1981), that meniscal-flap tears may be signs of degenerative changes. Twelve of the patients in the operated on group were 60 years or older. The results in these did not differ from the younger patients. However, in 4 of the older patients the results were poor, and 3 of these had gonarthrosis. Meniscal surgery is unpredicatable in patients with degenerative changes (Lotke et al. 1981); evaluation of older patients for meniscal surgery requires great care and judgement.

References

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