Brace with a lateral pad for patellar pain

2-year follow-up of 25 patients

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A patellar brace with a lateral pad was used in 25 patients with unilateral retropatellar pain syndrome. The patients were told to use the brace in activities that loaded the patella, and they were followed for 1 to 2 years. At follow-up, 8 patients were improved, while the symptoms were unchanged or worse in 17. The level of activity was increased in 4 patients, reduced in 3, and unchanged in the others. It is concluded that treatment with a patellar brace with a lateral pad is not likely to succeed in the majority of patients with retropatellar pain syndrome.

It has been suggested that the idiopathic retropatellar pain syndrome is caused by a tight lateral retinaculum—the excessive lateral-pressure syndrome (Ficat et al. 1977, 1979). For this reason the use of a patellar brace with a lateral pad to obtain realignment of the patella has been recommended (Lysholm et al. 1984). We report our experience with such a brace for idiopathic retropatellar pain.

Patients and methods

From July 1987 to July 1988, 25 patients—13 males, 12 females, aged 24 (18–46) years—were admitted to our department for unilateral retropatellar pain syndrome. The basis for the diagnosis was pain upon contracting the quadriceps while the patella was held downwards. Further, at least two of the following symptoms were required: pain on climbing stairs and squatting, pseudolocking, pain or stiffness after sitting.

The following conditions were excluded: Q angle > 20°, sulcus angle > 150°, patellar index > 1.20, increased femoral neck anteversion evaluated by hip rotation, and increased tibial torsion estimated from the position of the malleoli.

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The patients were all given a patellar brace with a lateral pad (Rheband 208, Rheband AB, Stockholm, Sweden) and were instructed to use it during activities that loaded the knee. They were followed for 1–2 years, and the results were assessed by the patients and scored according to Lysholm and Gillquist (1982).

Results

In 8 patients the Lysholm score increased from 37 ± 21 to 80 ± 18 points. In 10 patients the symptoms were unchanged, and in 7 patients they were even worse. The score in these patient was unchanged or reduced (Table 1).

Table 1. Knee function according to Lysholm and Gillquist (1982) before and after bracing in 25 patients with unilateral patellar pain syndrome

Score	Before	After
0–9	0	0
10–19	4	1
20–29	4	2
30–39	1	1
40–49	6	4
50–59	5	5
60–69	2	3
70–79	3	5
80–89	0	0
90–100	0	3
Total	25	25

Table 2. Activity before and after bracing in 25 patients with unilateral patellar pain syndrome

	After 2 years			
Before	High	Moderate	Low	Total
High	3	1	0	4
Moderate	0	9	2	11
Low	2	2	6	10
Total	5	12	8	25

High: regular sports activities.
Moderate: some sports activities.
Low: no sports activities.

Four patients had increased, while 3 patients had decreased their level of activity (Table 2).

Discussion

The concept of patellar pain as an extensor mechanism dysfunction has led to the use of a patellar brace (Levine and Splain 1979, Palumbo 1981, Lysholm et al. 1984). Lindberg (1986) compared braces of different construction and found that they all improved extension torque and pain. The general impression was that a brace with a lateral pad was better than the others. There is, however, no definitive information about the clinical effects during long-term use of such a brace. A brace is not supposed to be used continuously because of skin problems; our patients were told to use it only during painful activities. Some of the patients found the brace uncomfortable, while in others it was tolerated. All the patients had, however, used the brace as prescribed during the observation period. The results of bracing were generally poor, and most of the patients did not benefit from the brace as regards physical activity. We were unable from this investigation to explain why some patients improved and others did not.

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