⁸ Bridges, K, and Lowbury, E J L, *Journal of Clinical Pathology*, 1977, **30**, 160.
⁹ Roe, E, Jones, R J, and Lowbury, E J L, *Lancet*, 1971, **1**, 149.
¹⁰ Stone, H, in *Contemporary Burn Management*, ed H C Polk and H H Stone, p 203. Boston, Little Brown, 1971.
¹¹ Bryan, L E, Shahrabadi, M S, and Van den Elzen, H M, *Antimicrobial Agents and Chemotherapy*, p 191. Washington, American Society for Microbiology, 1974.

¹² Kontomichalou, P, Papachristou, E, and Angelatou, F, *Antimicrobial Agents and Chemotherapy*, p 866. Washington, American Society for Microbiology, 1976.
¹³ Witchitz, J L, and Chabbert, Y A, *Annales de l'Institut Pasteur*, 1972, **122**, 367.
¹⁴ Roe, E, and Lowbury, E J L, *Journal of Clinical Pathology*, 1972, **25**, 176.
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Alternative postmeniscectomy regimen

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Summary and conclusions

Eighty patients who had undergone routine meniscectomy were divided into two groups for postoperative management. The first 40 patients were treated by the traditional method of a compression bandage with a backsplint, followed by a 10-day stay in hospital. In the other 40 patients a compression bandage was applied, reinforced by a plaster cylinder. Weight-bearing was allowed with the aid of crutches, and patients were discharged after four days in hospital. Adequate splintage and early ambulation was more convenient and comfortable for postoperative management, and no complications ensued. Less time was needed for physiotherapy, and earlier return to work and resumption of normal activities were made easier.

Introduction

Meniscectomy is one of the commonest orthopaedic operations, and much has been published on the mechanism of the injury

and the diagnosis of a tear as well as the operative technique. Little attention, however, has been paid to postoperative management. Many orthopaedic surgeons use the traditional method, as outlined by Watson Jones¹—namely, a compression bandage with or without a backsplint and early and intensive quadriceps exercises followed by weight-bearing when the sutures are removed on the 10th day. Other workers^{2,3} have advised early mobilisation in a compression bandage, and O'Donoghue⁴ recommended weight-bearing on the second or third day. Early movement, however, is often painful, producing a large effusion and wasting of the quadriceps muscles.⁵ If movement could be prevented by adequate splintage discomfort would be lessened and the patient become ambulant sooner, thus helping to reduce quadriceps wasting. To test this theory we compared postoperative progress and function in two groups of patients. The first were treated by traditional methods and the second by immobilisation and early weight-bearing.

Patients and methods

Eighty consecutive patients who had undergone routine meniscectomy for a demonstrable lesion of the meniscus were divided into two groups for postoperative management. All operations were performed by, or under the immediate supervision of, one of us. Patients with other conditions affecting the knee—for example, ligamentous ruptures or bone pathology—were excluded. Group 1—Forty of the 80 patients were treated by compression bandage and backsplint, and quadriceps exercises were begun on the second postoperative day. Weight-bearing was not permitted until the sutures had been removed. All of these patients remained in hospital for a minimum of 10 days. Group 2—In the second group of 40 patients a compression

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TABLE I—Details of patients who had undergone meniscectomy and received either traditional postoperative treatment or were treated by adequate splintage and early mobilisation

	No	Average age	Sex		Occupation		Sporting activities			Duration of symptoms			Side of injury	
			M	F	Light	Heavy	Professional	Amateur	None	<4 wks	4 wks-3 mths	>3 mths	Medial	Lateral
Traditional management	40	28.2	30	10	36	4	3	26	11	4	16	20	26	14
Splintage and early mobilisation	40	29.9	32	8	35	5	5	25	10	6	16	18	29	11

TABLE II—Operative findings in patients who underwent meniscectomy and were managed postoperatively either traditionally or by adequate splintage and early mobilisation. Figures are numbers of patients

Type of lesion:	Posterior	Anterior	Bucket-handle	Degenerative	Cystic
Traditional management	11	10	14	2	3
Splintage and early mobilisation	10	11	15	3	1

bandage was applied in the usual way, and was reinforced by four six-inch (15 cm) plaster-of-Paris bandages that were wound round the crêpe bandage. Weight-bearing was allowed with the aid of crutches for balance on the third day, and patients were discharged on the fourth day. Physiotherapy was given only to calf muscles and chest. Plaster-of-Paris bandages were removed on the 10th day, and quadriceps exercises were then begun, either at home unaided or in the physiotherapy department.

The two groups were comparable (table I). Heavy occupations included mining (two in each group), others were labourers on building sites. All patients in the second group were discharged on the fourth day, as planned. No complications occurred. When questioned, patients in group 2 seemed to have had less discomfort than those who received traditional treatment (group 1). Indeed, five patients in group 2 had previously been managed traditionally after meniscectomy, and they unanimously preferred treatment by adequate splintage and early weight-bearing as being more comfortable and convenient. Operative findings are shown in table II.

Results

The amounts of effusion fluid, estimated on the 10th postoperative day, were similar in both groups. In group 1 effusions were small in 14 patients, moderate in 19, and large in seven. In group 2 amounts of fluid were small in 13, moderate in 23, and large in four. The average times before patients could return to work and resume sporting activities were $8.8 \pm SD 3.6$ weeks and 13.5 ± 5.3 weeks respectively in group 1, and 7.7 ± 2.6 weeks and 10.5 ± 3.0 weeks respectively in group 2. These results were not significantly different (Mann-Whitney U test). Miners and labourers returned to work in 10 weeks (group 1) and 7.20 weeks (group 2). Patients who had undergone a lateral meniscectomy took longer to return to work—9.8 weeks in group 1 and 8 weeks in group 2.

The symptoms and results of examination in the two groups when seen as outpatients six months or more after operation were similar. In group 1 two patients had discomfort when playing football, one had a mild effusion six months postoperatively, and one had quadriceps wasting (1 inch; 2.5 cm). One of those in group 2 had discomfort when playing squash, one had a mild effusion eight months after operation, and one who had a degenerative lesion of the anterior horn lacked 30° flexion in the joint.

Comment

We suggest that applying an adequate splint and allowing early walking is more convenient and comfortable postoperatively for patients who have undergone routine meniscectomy. In addition, when beds are in short supply the quicker turnover reduces the waiting list, while time is also saved on physiotherapy. None of our patients who were treated in this way had complications, and a persistent effusion was not a problem. Return to work is not delayed, and the time before patients can resume full sporting activities may even be slightly reduced.

References

- 1 Watson Jones, Sir R, *Fractures and Joint Injuries*. Edinburgh, Livingstone, 1976.
- 2 Terhune, S R, et al, *Journal of Bone and Joint Surgery*, 1943, 25, 663.
- 3 Nelson, M A, *Annals of Physical Medicine*, 1968, 9, 282.
- 4 O'Donoghue, D H, *Current Practice in Orthopaedic Surgery*. St Louis, Adams, 1963.
- 5 Smillie, I S, *Injuries of the Knee Joint*. Edinburgh, Livingstone, 1963.

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Value of 1-alpha-hydroxy vitamin D₃ in treatment of primary hyperparathyroidism before parathyroidectomy

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Summary and conclusions

The postoperative course of six patients with primary hyperparathyroidism and obvious radiological evidence of bone disease pretreated with 1-alpha-hydroxy vitamin D₃ (1αHCC) was indistinguishable from that of six patients with a similar clinical and radiological picture who were not pretreated. 1αHCC may increase the hypercalcaemia in some cases and cannot be recommended for the routine preparation of such patients for surgery.

Introduction

Most patients with primary hyperparathyroidism seen in present-day practice do not have overt radiological evidence of

the disease when examined by standard techniques. After successful parathyroidectomy such patients rarely develop severe symptomatic hypocalcaemia. Patients with obvious radiological changes of hyperparathyroidism, however, may develop severe postoperative hypocalcaemia.¹ This may be difficult to control, especially as conventional vitamin D may not raise the serum calcium concentration for several days after the introduction of high-dose treatment. Because of the severity of the hypocalcaemic symptoms in some patients any treatment that would safely prevent hypocalcaemia would be an important advance. Pretreatment with 1α-hydroxy vitamin D₃ (1αHCC) has been claimed almost to abolish the postoperative symptomatic hypocalcaemia of patients with bone disease.² As a result, 1αHCC pretreatment has been advised in both primary and tertiary hyperparathyroidism associated with bone disease.³⁻⁵ We report our experience of 1αHCC treatment in six patients with primary hyperparathyroidism and radiological evidence of bone disease and compare it with the results in six patients with similar radiological changes who were not pretreated. The postoperative course in 14 patients without bone disease is also presented.

Patients and methods

Group A comprised 14 patients with primary hyperparathyroidism who had been recently investigated by one of us (DAH). None had radiological evidence of hyperparathyroidism, and in each case a single parathyroid adenoma was removed which resulted in cure.

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