EARLY POST OPERATIVE MANAGEMENT
FOLLOWING MENisceCTOMY

by

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ARTHROTOMY of the knee joint for the removal of a torn or degenerate meniscus is a common orthopaedic procedure. Demands on bed occupancy are usually high. Different methods of management have been advocated in the early post operative period ranging from weight bearing and knee bending within twenty four hours after operation\(^1\) to ten days bed rest in hospital and non weight bearing with the knee in a Robert Jones bandage.\(^2\)

This paper compares two methods of management in the early post operative period. In one, the patient had an extension splint applied for two weeks and was allowed to weight bear twenty four hours after operation. The second group were managed non weight bearing using crutches for two weeks and encouraged to bend the knee. Patients were discharged home as soon as they had good quadriceps muscle control and were apyrexial.

The aim of this study is to assess if patients could safely be discharged from hospital early and to compare the two groups during rehabilitation.

PATIENTS AND METHODS

Forty one patients were admitted from the waiting list for exploration of the knee joint. Pre operatively they were taught static quadriceps exercises. An effusion was present in twenty six patients (63 per cent), quadriceps wasting was present in thirty patients (73 per cent) and thirteen (32 per cent) had a locked knee. Patients were selected into two comparable groups for age, sex and side of joint involved. A standard arthrotomy was performed with a general anaesthetic and a pneumatic tourniquet was used.

The first group had the wounds dressed with a double layer of wool and crepe bandage with a light metal alloy gutter extension splint applied over the dressing. Weight bearing was commenced twenty four hours post operatively. The second group had a similar bandage applied and were allowed up after twenty four hours for managed non weight bearing with crutches. The outer dressing was removed after forty eight hours leaving a single layer of wool and crepe bandage for support and knee bending was commenced. All patients were encouraged to continue static quadriceps muscle exercises.

When good quadriceps muscle control had returned and no pyrexia or other complications were present, the patients were allowed home if home conditions were suitable. Thirty four patients (72 per cent) were discharged within three days of operation. Four were discharged within seven days and the remaining three were discharged within ten days, one having social problems and the other two required intensive physiotherapy for poor quadriceps muscle control.
Sutures were removed after fourteen days in all patients and the knees clinically examined. The wound was inspected, any effusion present was graded as mild, moderate or severe and the quadriceps muscle bulk in both knees was assessed by measurement of the circumference of the thigh at a fixed point above the knee joint. A support bandage of double Tubigrip was applied and all patients allowed to weight bear and encouraged to knee bend. Physiotherapy as an out patient was arranged to supervise rehabilitation exercises. A review appointment was made six weeks after surgery and a final examination of the knee made.

RESULTS

Following meniscectomy on forty one knees, twenty were treated with an extension splint and twenty one treated non weight bearing with early mobilisation. A medial meniscectomy was performed on twenty five knees with sixteen having a lateral meniscectomy.

Examination at fourteen days following surgery showed that patients mobilised early had a greater number of moderate effusions, nine (43 per cent) compared to two (10 per cent) in the splinted group. After six weeks those patients mobilised early still had more persisting effusions (Table). The difference in the groups has a statistical significance with \( P < 0.05 \). Three patients in the group mobilised early had an extension lag fourteen days after operation but this had cleared at the final examination. No patients in the splinted group had an extension lag. There was no difference in the amount of quadriceps wasting between the two groups at either examination.

| Effusions present in knee joints at two weeks and six weeks post operatively |
|-------------------------------------------------|
| **Effusion at two weeks** | **Effusion at six weeks** |
| None | Mild | Moderate | Severe | None | Mild | Moderate | Severe |
| With splint | 4 | 14 | 2 | 0 | 18 | 2 | 0 | 0 |
| Without splint | 2 | 10 | 9 | 0 | 12 | 9 | 0 | 0 |

DISCUSSION

Smillie\(^2\) advises that patients should not be allowed home before ten days following meniscectomy. Our practice is to discharge patients home early because of demands on hospital beds provided that physiotherapy progress is satisfactory and that the temperature is normal. Seventy two per cent of patients were discharged within three days of operation. No wounds became infected and wound healing was not delayed.

The patients with knees splinted in extension in the early post operative period were found to have fewer effusions compared to the group whose knees were mobilised early both at the two week and six week examination. They also had better quadriceps muscle control in the early rehabilitation period as there were no cases of extension lag in this group compared to three in the group mobilised early. This agrees with Nelson\(^3\) that the inflammatory reaction produced by arthrotomy
resolves more rapidly when the knee is rested, leading to a quicker recovery of quadriceps function. Our findings also agree with Wynn Parry\(^4\) who advised that effusions occurring during rehabilitation following meniscectomy should be treated by immobilisation of the knee in a back splint.

**SUMMARY**

Two different methods of post operative management following arthrotomy of the knee are compared. Those splinted in extension for fourteen days post operatively had fewer effusions during the rehabilitation period and better control of quadriceps muscles. Early discharge from hospital following arthrotomy of the knee produced no adverse effects.

**REFERENCES**

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