

Initial assessment and follow-up by a physiotherapist of patients with back pain referred to a spinal clinic

P G Hourigan MCSP C R Weatherley MD FRCS *The Spinal Unit,
Princess Elizabeth Orthopaedic Hospital, Wonford Road, Exeter, Devon EX2 4UE, UK*

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Summary

To reduce waiting times and costs, a specially trained physiotherapist was employed to review 100 patients with back pain referred by general practitioners (GPs) to a spinal clinic; 78% proved to have a spinal disorder. Only 24% of the original referrals needed to see the surgeon, with 76% being successfully managed by the physiotherapist. Six per cent of referrals were deemed inappropriate and 16% of patients failed to attend. To evaluate the physiotherapist's assessments each case was discussed with the consultant surgeon, and the appropriateness of the management of each patient was similarly investigated.

With appropriate training and a good working relationship with the surgeon, a chartered physiotherapist can successfully screen patients in a low back pain clinic, such that the efficiency of the unit is improved by improving the throughput whilst maintaining the same standard of care.

Introduction

Spinal surgery is now a well established subspeciality of orthopaedic surgery, and several spinal units have been set up around the UK. Non-trauma patients presenting at such units generally have back pain. This pain may be due to a variety of conditions which commonly include acute disc lesions, chronic degenerative disc disease, spondylolysis, listhesis and failed back surgery. More rarely, it can be secondary to tumour, infection or deformity.

There is never enough consulting time, with the result that acute disc problems requiring surgery may not be seen promptly. Furthermore, crucial delays may occur in the diagnosis and management of patients with spinal tumour and infections. Health Authorities are under governmental pressure to reduce the number of patients on waiting lists, whilst keeping costs to a minimum. How can this be achieved? In Exeter and in the USA physiotherapists or other practitioners have carried out initial review of general orthopaedic cases in out-patient clinics^{1,2}. We have instituted a similar system for patients presenting to the Exeter Spinal Unit with back pain.

Patients and methods

It was decided that a physiotherapist would see patients for initial assessment. The type of case regarded as suitable for such examination was those referred with a diagnosis of acute disc prolapse or chronic degenerative disease, and, exceptionally, other patients for whom an urgent appointment had been requested by the GP but who could not be seen

immediately by the surgeon. Cases that were regarded as not suitable to be seen by the physiotherapist were referrals from other consultants, those who had had unsuccessful spinal surgery, those with suspected tumour or infection, those with spinal deformity, and children. In all cases, GPs were asked for their approval for their patients to be seen initially by the physiotherapist. All but three agreed. The patient's consent was also obtained.

Training

The physiotherapist had been previously attached to the Spinal Unit for several months and had been involved in the pre-operative assessment of all cases, their non-surgical and post-operative management. Before the start of this study the physiotherapist (PH) received guidance with respect to history taking and clinical examination as practised by the surgeon (CRW) with whom he would be cooperating. As a result of this initial training, the physiotherapist recorded only the information considered pertinent by the surgeon for the patient's management. In this way the subsequent joint discussion of each case between the physiotherapist and the surgeon was brief and to the point, thus saving the surgeon's time and thereby increasing the number of out-patients who could be seen.

Out-patient assessment

The physiotherapist's assessment followed the usual medical practice of history taking and clinical examination, and included straight X-rays of the lumbar spine. Approximately 40 min was allowed for this evaluation and a provisional programme of management or further investigation was drawn up. The findings in each case were subsequently reviewed together with the X-rays at a meeting between the physiotherapist and the consultant to approve or modify the proposed plan. Patients for whom the diagnosis or management was not clear were seen by the surgeon. Patients who failed to attend were telephoned by the physiotherapist.

Table 1. Patient details

Diagnoses	No.	Age (years)	
		Mean	Range
Acute prolapsed intervertebral disc	20	45	27-64
Chronic back pain secondary to degenerative disease	45	54	29-79
Spondylolysis/spondylolisthesis	7	44	22-64
Spinal infection	1	41	41
Vertebral osteochondritis	1	15	15
Paget's disease	1	78	78
Diabetic peripheral neuropathy	1	71	71
Cord tumour	1	64	64
Ankylosing spondylitis	1	24	24
Inappropriate referrals	6		
Failure to attend	16		

Table 2. Further management. (Patients who failed to attend are excluded)

Type	No. of patients*
Physiotherapy	13
Orthosis	17
Further evaluation by physiotherapist	10
Further evaluation by surgeon	8
Referral to another department, eg neuro-surgery, rheumatology, dietitian, pain relief clinic	11
Surgery	6
Lumbar epidural injection	8
Advice and discharge	12

*One patient had more than one type of management, ie, orthosis provision and epidural

Results (first 100 consecutive cases)

Patients were aged 15-79 years (mean 47) and there were 52 men and 48 women. Table 1 shows the final diagnoses after assessment. Sixty-five per cent of cases seen by the physiotherapist proved to have disc prolapse or chronic degenerative disease: 7% had spondylolysis or spondylolisthesis; 6% had other conditions; 6% were inappropriate referrals; and 16% failed to attend their out-patient appointment. Non-attendance was related to resolution of symptoms or forgetting appointments. Of the 78 patients presenting with back pain, a total of 20 underwent further radiological investigation: nine patients needed radiculography; four computerized tomography (CT); two Tc⁹⁹ bone scan; four magnetic resonance imaging; and two tomography (one patient had a bone scan and CT).

After initial evaluation, only 14 needed to be seen by the surgeon to clarify the diagnosis, or to confirm the need for operation, and six of these came to surgery (Table 2), all of whom had a prolapsed intervertebral disc. Furthermore, 12% of patients were discharged after receiving advice but no treatment. Fourteen patients diagnosed as having a prolapsed intervertebral disc improved between referral and review, or following an epidural injection, such that surgery was not indicated.

Fifty-two patients were reviewed by the physiotherapist at 4 months: 10 needed further consultation with the surgeon: 10 were successfully managed conservatively (physiotherapy/orthoses): two had repeat epidurals; three had magnetic resonance imaging, and two were referred to the pain clinic. The remaining 25 were improving with conservative treatment and were subject to further review.

Discussion

The lifetime prevalence of low back pain is reported to be as high as 70% in some populations and in about 20% is severe³. Chronic back pain is present in 3-7% of adults⁴. Ten to fifteen per cent of all sickness absence from work in the European Community is due to back pain⁴. This condition is one of the most common reasons for referral to an orthopaedic surgeon and, where they exist, spinal units, and waiting lists are long. In an effort to reduce waiting times and to increase the number of people who could be seen, a trial appointment was made of a physiotherapist to this spinal unit.

In this report of the first 100 patients seen, the frequency of the underlying conditions was very much

as anticipated: the commonest causes of symptoms were chronic degenerative disease, followed by acute disc prolapse and spondylolysis/spondylolisthesis. However, a large proportion (16%) failed to attend. The reasons, as outlined, were resolution of symptoms or patients forgetting their appointment. The throughput of the clinic was, therefore, reduced and could have been improved by citizen responsibility.

Seventy-eight per cent of patients were appropriately referred to the Spinal Unit, and would usually have been seen by a surgeon. As a result of the initial screening by the trained physiotherapist only a small proportion (24%) eventually needed to be seen by the surgeon. Thus, just over half the patients were seen and successfully managed by the physiotherapist, making it possible for the surgeon to attend to other more serious or urgent cases. Twelve per cent of patients needed advice but no treatment, and this could be appropriately given by the physiotherapist.

This use of a physiotherapist in this role had the additional advantage of providing a link, not only between the GP and the surgeon, but also to the management of back pain in the community by physiotherapists attached to general practices. The attachment of a dedicated physiotherapist to a Spinal Unit has the advantage that continuity of care is provided for the patients attending that Unit.

The success of this trial was largely attributable to the effective close cooperation between the surgeon and the physiotherapist and was dependent on the training of the physiotherapist to the surgeon's working techniques. If such a practice is to be adopted with equal success in other centres, it is important that the physiotherapist appointed adopts the working methods of the surgeon involved, since variations in practice exist.

As far as we are aware, this is the first report of the use of a physiotherapist to assess back pain at a spinal unit in the UK and a long-term review of this practice is planned. The initial benefits are clear: throughput has increased substantially while the same high standard of expertise has been maintained. Cases who need to see the surgeon are brought to his attention earlier with much of the initial appraisal already performed. All the patients seen by the physiotherapist have been discussed with the surgeon. In continuing with this service we plan that the physiotherapist will take sole responsibility for providing an opinion and instituting management of those patients he deems appropriate, with recourse to a surgical opinion where necessary. We would emphasize, that, whilst the use of a paramedic has been successful in a back pain clinic, it is important to appreciate that this condition is especially amenable to this form of review.

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