Acute low back pain: patients' perceptions of pain four weeks after initial diagnosis and treatment in general practice

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SUMMARY. In a nationwide study of the treatment of acute low back pain with and without radiation in general practice in the Netherlands the subjective well-being of patients was evaluated by means of a short questionnaire sent to patients four weeks after the initial contact with their general practitioner.

After this period pain had disappeared in 28% of the patients, was diminished in 47%, was unchanged in 2% and was aggravated in 4%. There was no difference in the pain score of patients with and without follow-up encounters with their general practitioner. In all instances patients with low back pain without radiation fared significantly better than those with radiation. Radiation of pain was not constant — during the four-week follow-up period it developed in 19% of the patients originally without radiation and it disappeared in 44% of the patients originally suffering radiation.

Introduction

LOW back pain is a considerable medicosocial problem in the Western world.[1] Most of the information on the aetiology, diagnosis, treatment and prognosis of this ailment has been gathered by specialists and is not always applicable to general practice. Studies on back pain in the primary care setting are scarce and are largely based on experience in one practice only.[2-4] They generally show the following results:

— Most cases of low back pain can be dealt with in general practice.

— Prognosis depends on the number of previous attacks and on whether or not pain is felt in one or both legs.

— Most acute episodes last no longer than one month.

In order to obtain more representative information from general practice a nationwide survey was conducted in the Netherlands. In view of the absence from the literature of precise criteria separating different types of back pain a purely descriptive diagnostic system was used in this prospective study based on earlier experience in primary care.[2,4] The proportions of acute low back pain without radiation and with radiation to one or both legs which were presented to, examined and treated by general practitioners in the Netherlands were determined.[5]

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The part of the study that examined how patients fared subjectively four weeks after initial contact with their general practitioner is presented here. The aim was to try to establish the outcome of intervention by consideration of the pain score and the localization of pain as recorded independently by patients after four weeks.

Method

A random sample of all general practitioners in the Netherlands was invited to participate in this study. Full details of the method can be found in an earlier publication.[5]

Acute low back pain was defined as back pain which had existed for less than 14 days at the first consultation and was localized subjectively within the following boundaries: proximally, the twelfth thoracic vertebra, laterally, the lateral edges of the long back muscles and the lateral outlines of the buttocks, and distally, the buttock folds. Acute low back pain with radiation was defined as pain which was localized in the same area with radiation to one or both legs.

The study subjects were patients seen by their own general practitioner at a consultation or on a home visit for a first episode of acute low back pain during a four-week period in 1982. To qualify for the study the patients had to be between the ages of 15 and 66 years and of Dutch ethnic background. At the time of the first consultation the patients were not informed of the study, so that their further consulting behaviour could be investigated without bias.

The participating general practitioners were instructed to examine and treat their patients as normal and they were free to initiate follow-ups if they wished.

In the fifth week after the first consultation patients were sent a short questionnaire by their own doctor asking them about the persistence and localization of their pain at that time. To safeguard anonymity the completed questionnaires were returned to the Netherlands College of General Practitioners for further analysis.

The patient questionnaire contained a pain scale consisting of the following categories: disappeared, diminished, unchanged and aggravated. In the analysis the first two categories were defined as 'better' and the last two as 'not better'. Localization of pain could be indicated in the following ways: back pain only, back and leg pain or leg pain only. In the analysis the last two categories were combined as both indicate radiation of pain.

The chi-square test was used to test independence in a contingency table. In the case of 2 x 2 tables a correction for continuity was made.[6]

Results

During the study period 497 patients were treated by 120 general practitioners — 475 patients completed the questionnaire (96%). Of these 475 patients 295 (62%) suffered from low back pain only whereas 180 (38%) had back pain radiating to one or both legs (Table 1).

After the first contact 52 patients (11%) were referred to specialists or physiotherapists for further diagnosis and/or treatment. Thus a total of 423 patients (89%) remained in general practice for treatment — 156 patients (33%) had one or more follow-up contact with their general practitioner while 267 (56%) had no follow-up.

Table 1. Presence of pain after four weeks by initial pain, referral and follow up ($n=475$).

Initial low back pain	Pain after four weeks	Number (%) of patients			
		Not referred		Referred	
		No follow up	With follow up	(follow up unknown)	Total
Without radiation	Disappeared	80 (*43*)	16 (*20*)	7 (*24*)	103 (*35*)
	Diminished	78 (*42*)	44 (*54*)	17 (*59*)	139 (*47*)
	Unchanged	25 (*14*)	18 (*22*)	4 (*14*)	47 (*16*)
	Aggravated	2 (*1*)	3 (*4*)	1 (*3*)	6 (*2*)
	Total	185 (*100*)	81 (*100*)	29 (*100*)	295 (*100*)
With radiation	Disappeared	20 (*24*)	7 (*9*)	4 (*17*)	31 (*17*)
	Diminished	31 (*38*)	45 (*60*)	10 (*43*)	86 (*48*)
	Unchanged	26 (*32*)	18 (*24*)	6 (*27*)	50 (*28*)
	Aggravated	5 (*6*)	5 (*7*)	3 (*13*)	13 (*7*)
	Total	82 (*100*)	75 (*100*)	23 (*100*)	180 (*100*)
Total	Disappeared	100 (*37*)	23 (*15*)	11 (*21*)	134 (*28*)
	Diminished	109 (*41*)	89 (*57*)	27 (*48*)	225 (*47*)
	Unchanged	51 (*19*)	36 (*23*)	10 (*25*)	97 (*21*)
	Aggravated	7 (*3*)	8 (*5*)	4 (*6*)	19 (*4*)
	Total	267 (*100*)	156 (*100*)	52 (*100*)	475 (*100*)

Pain score

Four weeks after initial diagnosis and treatment only 28% of all patients did not experience any pain. However, persistence of pain was found to be significantly different for the groups without and with radiation (χ^2 = 16.7, 1 degree of freedom, $P<0.001$). In the former group 82% of the patients felt 'better' (pain disappeared or diminished) after one month, whereas in the latter group only 65% felt any improvement.

Of the 423 patients who were not referred 167 (39%) did not have a follow-up appointment despite the persistence of pain. Although doctors would normally consider patients who were not referred and who made no further contact to be 'cured', the pain score of the 267 patients who had no follow-up appointment was not significantly lower than for the 156 patients who had return appointments — 22% of the former group were classified as 'not better' (pain unchanged or aggravated) compared with 28% of the latter group (Table 1). Within this group of cured patients significantly more patients without radiation (85%) were better than those with radiation (62%) (χ^2 = 15.7, 1 df, $P<0.001$).

Radiation of pain

The presence of radiating pain decreased from 38% of all patients at the initial examination (Table 1) to 32% after four weeks (Table 2). However, radiation was not constantly present in the same patients — it developed in 19% of all original patients suffering back pain only during the follow-up period and disappeared in 44% of those initially reporting radiation.

In all patients those without radiation fared significantly better than their counterparts with radiation (Table 2).

Furthermore, it was found that patients who experienced radiating pain at the initial consultation (and who were not referred) had on average significantly more return appointments (0.7) than those without radiation (0.4).

Table 2. Presence of radiating pain after four weeks ($n=475$).

Presence of radiating pain after four weeks	Number (%) of patients		
	Initial pain		Total
	Without radiation	With radiation	
Pain disappeared, no radiation	103 (*35*)	31 (*17*)	134 (*28*)
Back pain only	136 (*46*)	49 (*27*)	188 (*40*)
Back and leg pain or leg pain only	56 (*19*)	100 (*56*)	153 (*32*)
Total	295 (*100*)	180 (*100*)	475 (*100*)

χ^2 = 73.4, 2 df, $P<0.001$.

Discussion

The most interesting finding was that 72% of the patients still experienced pain four weeks after the diagnosis of acute low back pain by their general practitioner. This is contrary to the opinions of an international group of general practitioners who considered that the period of disability was less than four weeks.[7]

It was also interesting to note that despite the persistence of pain 39% of the non-referred patients did not have a follow-up appointment with their general practitioner. This probably indicates that many patients can cope with acute low back pain themselves to a large extent. It was already known that most people cope with back pain without consulting a doctor.[8] Therefore the consulting behaviour for this ailment should be investigated further.

This study confirms the importance of the history for the prognosis of acute low back pain.[2-4] At the first consultation a general practitioner can therefore predict, without examining the patient, that a patient with pain radiating to one or both legs will fare worse than a patient with no radiation and that a patient with radiating pain will have more return appointments

than a patient without. Moreover, general practitioners should realize that because patients with acute low back pain do not return this does not mean that they are cured. It might be wise to inform back pain sufferers at their initial consultation that their complaint may be protracted.

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