

Patients' versus general practitioners' assessments of pain intensity in primary care patients with non-cancer pain

Pekka Mäntyselkä, Esko Kumpusalo, Riitta Ahonen and Jorma Takala

SUMMARY

Pain is a major cause for visiting a primary care physician. There are, however, few studies on the assessment of pain patients at the primary care level. The aim of this cross-sectional study was to investigate the concordance between general practitioners' (GPs') and patients' assessments of pain intensity and whether this assessment is influenced by the duration or intensity of pain. Seven hundred and thirty-eight patients aged 16 to 75 years, who were visiting a GP because of pain, participated. Both the patients and the GPs rated pain intensity using the horizontal 100 mm Visual Analogue Scale (VAS). Means and correlations were calculated using non-parametric tests. The VAS scales were arbitrarily divided into five grades (one unit = 20 mm) to investigate the concordance between GPs' and patients' assessments of pain intensity. Spearman's correlation coefficient between GPs' and patients' assessments was 0.31 for non-chronic pain (of duration less than six months) and 0.20 for chronic pain. GPs evaluated graded pain intensity at least one unit lower than patients in 37% of the visits. In one-fifth of the visits (20.5%), the GP's rating was at least two units lower than the patient's rating. The more severe the pain as assessed by patients, the greater the non-concordance between patients' and GPs' assessments. There was considerable non-concordance between GPs' and patients' assessments of pain intensity. GPs tended to estimate their patients' pain intensity as clinically significantly lower than the patients themselves, particularly in chronic and severe pain.

Keywords: pain; pain measurement; primary health care.

Introduction

PAIN is a major cause for visiting the physician in general practice¹ and chronic pain is an exceptional problem among patients in primary health care.² In cases involving malignant^{3,4} or postoperative pain,⁵ it has been found that physicians and nurses rate pain lower than patients. However, there are only a few studies on the assessment of pain patients at the primary care level. The Visual Analogue Scale (VAS) provides a simple technique for measuring subjective experiences such as pain,⁶ and has also been shown to be feasible in primary care research.⁷

The aim of this study was to investigate the concordance between general practitioners' (GPs) and patients' assessments of pain intensity and whether this assessment is influenced by the duration and intensity of pain.

Method

A total of 28 general GPs from 25 randomly selected health centres throughout Finland participated in the four-week study, comprising one week from each of the four seasons in 1996.¹ All visits, except those conducted after hours, were recorded. Detailed data were gathered if pain was given as the reason for the visit. GPs evaluated pain intensity using the horizontal 100 mm VAS (VAS-GP) with 'no pain' and 'worst imaginable pain' at the extreme ends. The diagnoses recorded by GPs were coded using the International Classification of Primary Care.⁸ A take-home questionnaire (and a prepaid return envelope) was given to the patients, including the 100 mm VAS (VAS-patient) for pain intensity and a question about the duration of pain. The patients were asked to fill in the questionnaire as soon as possible after the visit. The response rate was 58%.

Patients aged 16 to 75 years old were included in the analysis. The visits for which both GPs' and patients' VAS ratings were adequately recorded and for whom data about sex, age, and the duration of pain were available, were included in the analysis. Pain was regarded as chronic when it had lasted for more than six months.

Spearman's correlation coefficient was used to assess the correlation between the VAS-GP and VAS-patient scores. The differences between the groups were compared using the Mann-Whitney U-test, and the differences between the patients' and GPs' ratings were assessed using the Wilcoxon signed-rank sum test. In addition, we divided the VAS scales arbitrarily into five grades (one unit = 20 mm) to evaluate the influence of patients' self-perceived pain intensity on GPs' assessments. The differences between the groups based on these grades were assessed using the χ^2 test. Because of the two-peaked distribution of the VAS

P Mäntyselkä, MD, PhD, clinical lecturer; E Kumpusalo, MD, PhD, professor; J Takala, MD, PhD, professor, Department of Public Health and General Practice; and R Ahonen, PhD, professor, Department of Social Pharmacy, University of Kuopio, Finland.

Address for correspondence

Pekka Mäntyselkä, Department of Public Health and General Practice, University of Kuopio, PO Box 1627, 70211 Kuopio, Finland. E-mail: Pekka.Mantyselka@uku.fi

Submitted: 11 December 2000; Editor's response: 12 April 2001; final acceptance: 23 July 2001.

©British Journal of General Practice, 2001, 51, 995-997.

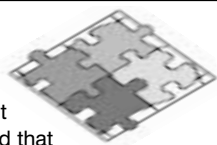
HOW THIS FITS IN

What do we know?

Previously, in cases involving malignant or postoperative pain, it has been found that physicians rate pain lower than patients.

What does this paper add?

The findings of our study suggest that there is considerable non-concordance between general practitioners' and patients' assessments of pain intensity involving primary care patients having non-cancer pain. GPs tended to estimate their patients' pain intensity as lower than the patients themselves, particularly in the case of severe and chronic pain.



scores, non-parametric tests were used.

This study was approved by the Research Ethics Committee of the University of Kuopio and the Kuopio University Hospital.

Results

Of the 914 responding patients aged 16 to 75 years, adequate data, including VAS ratings, age and duration of pain, were available for 738 patients (Table 1). Women comprised 516 (70%) of the patients. Among non-responders, the proportion of females was smaller (61%) and the median age slightly lower (46 years versus 50 years).

Among the study population, one-fifth of the 738 patients had chronic pain (Table 1) and 57% had musculoskeletal pain. A weak, though statistically significant, correlation was found between the VAS-patient and VAS-GP scores (Table 1). The correlation was stronger in non-chronic than chronic

pain. Patients' ratings of average pain intensity were significantly higher for chronic pain, whereas GPs' ratings for chronic pain did not differ from those for non-chronic pain. The average difference between the VAS-GP and VAS-patient ratings was 8 mm for chronic pain.

GPs evaluated graded pain intensity at least one unit higher than patients in 226 (30.6%) visits and similarly to patients in 327 (32.7%) visits. GPs evaluated pain intensity at least one unit lower than patients in 36.7% of the visits (Table 2). In one-fifth of the visits (20.5%), the GP's rating was at least two units lower than the patient's rating. The more severe the pain as assessed by the patients, the greater the non-concordance between the patients' and GPs' assessments ($P < 0.001$). At the highest grade of pain intensity as perceived by the patients, GPs rated pain lower than patients in 82.2% of the visits, and at least two units lower than patients in almost half of the visits. GPs rated pain intensity at least two units lower than patients in 20.5% of the visits owing to chronic pain, while the corresponding proportion for non-chronic pain was 13.1% ($P = 0.019$).

Discussion

These findings suggest that there is considerable non-concordance between GPs' and patients' assessments of pain intensity. GPs tended to estimate their patients' pain intensity as lower than the patients themselves, particularly in the case of severe and chronic pain. Previously, a similar finding had been reported for malignant and postoperative pain.³⁻⁵ The patients in the present study suffered mainly from benign musculoskeletal pain. Patients with musculoskeletal pain are generally less satisfied with the care received than patients with other chronic disorders.⁹ One reason for their dissatisfaction may be that underestimation

Table 1. Correlations and averages of VAS ratings for pain intensity as assessed by patients (VAS-patient) and GPs (VAS-GP) according to pain duration.

	All visits (n = 738)	Duration of pain (six months or less) (n = 582)	Duration of pain (more than six months) (n = 156)	P-value (Mann-Whitney U-test)
Spearman's correlation coefficient between VAS-patient scores and VAS-GP scores	0.29	0.31	0.20	
P-value	$P < 0.001$	$P < 0.001$	$P = 0.012$	
Mean VAS-scores (95% CI)				
VAS-patient scores	49.7 (48.2-51.2)	48.3 (46.6-49.4)	55.1 (51.9-58.3)	< 0.001
VAS-GP scores	46.5 (45.0-48.0)	46.2 (44.5-47.8)	47.7 (44.4-51.0)	0.5
P-value (Wilcoxon signed-rank sum test)	0.002	0.06	0.003	

Table 2. Concordance between patients' and GPs' assessments of pain intensity in categories based on graded pain intensity. One unit = 20 mm on a 100-mm Visual Analogue Scale (VAS).

Graded pain intensity as perceived by patients (VAS score)	GP's rating equal to or more than patient's rating		GP's rating one unit smaller than patient's rating		GP's rating at least two units smaller than patient's rating		Total	
	n	%	n	%	n	%	n	%
Grade 1 (1-20 mm)	64	100.0	0	0	0	0	64	100.0
Grade 2 (21-40 mm)	177	88.1	24	11.9	0	0	201	100.0
Grade 3 (41-60 mm)	125	57.1	71	32.4	23	10.5	219	100.0
Grade 4 (61-80 mm)	93	44.5	51	24.4	65	31.1	209	100.0
Grade 5 (81-100 mm)	8	17.8	17	37.8	20	44.4	45	100.0
Total	467	63.3	163	22.1	108	14.6	738	100.0

of pain intensity may prevent adequate management of their pain and lead to a failure in preventing chronic pain.

The risk for a clinically significant underestimation of pain intensity seemed to be most marked with patients reporting moderate or high pain intensity. A clear tendency towards the mean was found in GPs' assessments. Thus, in the case of patients reporting a low pain intensity, GPs seemed to rate pain intensity higher than the patients themselves, which may result in unnecessary treatment. In general, the patient's evaluation of his or her pain intensity should be accepted as a standard in assessing pain intensity, particularly in monitoring the response to treatment. However, the discrepancy between the patient's rating of pain intensity and the doctor's clinical assessment of pain may be an important indicator of complex problems behind the pain.

In doctor-patient communication, it is essential that the GP gains appropriate knowledge about the patient's condition. GPs should ask patients to rate their pain intensity as part of the clinical assessment. In managing primary care pain patients, the use of pain measurements, such as VAS or its modifications, may prove notably useful for the GP.

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Acknowledgement

The study reported in this paper was supported by a grant from Orion Pharma.