Factors influencing compliance in long-term proton pump inhibitor therapy in general practice

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SUMMARY

Long-term proton pump inhibitor (PPI) prescribing in general practice is common, but only a minority of patients request their prescriptions regularly. This study determined factors linked with compliance using questionnaires and diary cards. The chief factors determining whether or not patients took their PPIs were the presence or severity of symptoms and the desire to remain in personal control, together with a fear of side-effects and lack of knowledge about the drugs. As most such prescribing is for uncomplicated gastro-oesophageal reflux disease, on-demand therapy should now be formally advocated.

Keywords: proton pump inhibitors; compliance; primary care; prescribing.

Introduction

PROTON pump inhibitors (PPIs) are potent suppressors of gastric acid used for managing acid-sensitive disorders, and form the largest single group, by cost, of prescriptions in the National Health Service (NHS).[1] A substantial proportion of this cost derives from repeat prescriptions, mainly for uncomplicated gastro-oesophageal reflux disease (GORD).[2,3] Data suggest that three-quarters of such prescriptions are taken up only intermittently.[4] However, little is known of the patterns of long-term PPI use by patients and factors influencing their consumption. In line with previous studies on compliance that have recognized age, treatment duration, and side-effects as being among the contributory factors, we aimed to determine elements salient to long-term PPI therapy.

Method

From a previous study invoving 21 GPs with 46 500 registered patients, 209 (0.45%) were identified as receiving repeat prescriptions for PPIs.[4] A long-term prescription was defined as a prescription that had been established for more than one year and where no consultation was necessary.

A validated questionnaire was sent to 175 patients; 84% (209) of all patients known to be on long-term therapy, who had not requested sufficient prescriptions to ensure complete compliance in the previous year. Also, 12 patients presenting consecutively in one practice for their repeat PPI prescriptions were asked to complete a daily diary for six weeks.

The questionnaire used constructs from previous research on long-term therapy, the final version being derived after interviews and piloting on patients on long-term PPIs. We used 17 questions eliciting awareness of treatment, side-effects or addiction, forgetfulness, the desire to control treatment, the presence or severity of symptoms, treatment effectiveness, and the influence of prescription charges.

Results

The questionnaire response rate was 90% (158/175); male:female ratio = 56:44; average age = 61 years (range = 14 to 91 years). The remaining 10% did not differ in average age or sex. Omeprazole was prescribed to 134 patients (84.8%), lansoprazole to 17 (10.8%), and seven (4.4%) had switched preparations during the year.

Compliance rates

From the questionnaire, 112 (70.9%) patients reported taking their PPIs regularly, on a daily basis. Of the remaining 46, 25 (15.8%) took them on 'most days' and 21 (13.3%) took them 'sometimes'. There was no correlation between non-compliance and diagnosis, or average age, or sex of patient. The diaries (12) showed complete compliance in nine patients, the rest taking their treatment on less than 50% of days.

Factors influencing compliance

The main factors influencing compliance were the presence or absence of symptoms, the severity of symptoms, and a personal preference about when to take the treatment.

Treatment was indicated as beneficial by 90% of responders and 89.7% felt they needed a prescribed medication for their condition. A fear of side-effects, addiction, or lack of knowledge about why the treatment was needed and how it worked was reported by varying numbers. The diary cards confirmed that non-compliance was linked to the absence of symptoms.

Discussion

The chief finding is that the compliance of patients on long-term PPIs is related largely to the presence and severity of their symptoms and a desire by patients to be in charge of their therapy. This is unsurprising as PPIs produce rapid relief of acid-sensitive symptoms; however, questions arise as to whether treatment needs to be taken on all days.

This study is likely to have overestimated the proportion of patients (71%) taking their PPIs regularly. A previous study in the same setting indicated that only 21% requested sufficient prescriptions for total compliance,[4] and patients in this study were drawn from those not collecting their prescriptions regularly. Shortcomings in our methodology include a lack of data from those who collected their prescriptions regularly and the small, possibly unrepresentative, sample of those issued with diaries.

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Table 1. Responses to compliance questionnaire. Total number of responders who indicated non-compliance = 46 (not all responders answered every question).

Questionnaire statement	Agree		Disagree	
	n	%	n	%
Drug therapy factors				
I have a fear of side-effects which prevents me from taking the treatment every day	11	28.9	27	71.1
I am not sure how the treatment works	13	34.2	25	65.8
I worry that I might become addicted to the treatment	12	31.6	26	68.4
I worry that my body might become used to the treatment	18	47.4	20	52.6
I feel that the treatment is not really giving me any benefit	4	10.0	36	90.0
Symptom-related factors				
I take the treatment only if my symptoms are a problem	31	79.5	8	20.5
My decision to take the treatment depends on how severe my symptoms are	28	73.7	10	26.3
I don't take the treatment if I don't have any symptoms	29	74.4	10	25.6
I only take my treatment if my symptoms are not bearable	19	50.0	19	50.0
'Personal' factors				
I prefer to take the treatment only when I want to	26	68.4	12	31.6
I don't really understand why I need to take the treatment	5	12.8	34	87.2
On some days I forget to take my treatment	20	50.0	20	50.0
My decision whether to take my treatment every day or not is influenced by me having to pay prescription charges	3	7.9	35	92.1
I don't really feel that I need a prescribed medication for my condition	4	10.3	35	89.7

However, by using prescription rates, questionnaires, and diaries, we achieved useful triangulation confirming the overall patterns of PPI usage.

The results reinforce the need for pragmatic advice on regimens for long-term PPIs, especially when used for symptom relief rather than lesion healing[2,3] (e.g. for Barrett's oesophagitis), and, if daily compliance is deemed necessary, the need for effective communication.

As uncomplicated GORD is characterized by intermittent symptoms of varying intensity and rarely leads to complications, it seems appropriate to alter current practice and to formally recommend 'on-demand' therapy. Ironically, a by-product of the way patients treat themselves is a considerable relative cost saving to the NHS.

References

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