Quality in Primary Care 2006;14:95–7

Short report

A survey of patients' knowledge of gastrointestinal side-effects of NSAIDs in a rheumatology clinic

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ABSTRACT

Non-steroidal anti-inflammatory drugs (NSAIDs) are a common cause of adverse drug reactions (ADRs). For example, a Spanish study showed that NSAIDs were responsible for 8.8% of all ADRs reported, second only to antibiotics.[1] ADRs are also a significant cause of hospital admissions, with aspirin and NSAIDs being among the most common culprits.[2,3] Upper gastrointestinal (GI) bleeding and perforation are well-known common side-effects of NSAIDs.[4] About one-third of ulcer bleeding and perforation in elderly patients has been shown to be NSAID related.[5] Wynne and Long showed that many patients admitted with upper GI bleeding do not know this to be an NSAID side-effect, and continue taking the NSAID when bleeding starts.[6] In addition to patient morbidity and mortality from ADRs, there is considerable financial burden to the NHS.[3]

NSAIDs are widely used in rheumatology outpatients and primary care. The prescription cost analysis data for England showed that 24.4 million prescriptions were dispensed in the community for section 10.1 (containing NSAID) of the *British National Formulary* (*BNF*) during 2004.[7] This survey assessed the knowledge of GI side-effects of NSAIDs in rheumatology outpatients.

Keywords: knowledge, NSAIDs

Methods

A convenient sample of 95 patients attending a rheumatology outpatient clinic in a district general hospital (DGH) and taking an NSAID was identified. The survey was carried out over a four-month period. Patients on an NSAID were identified either by the consulting doctor or clinic nurse. No exclusion criteria were set. However, recruitment was limited because of the high clinical commitments of staff during these clinics. Therefore, not every patient taking an NSAID over the 4-month period was identified. Patients, with the help of the clinic nurse or consulting doctor, completed a questionnaire concerning their knowledge of the GI side-effects of NSAIDs. It was felt that should any patients be identified with limited knowledge of potential side-effects, the very process of completing the questionnaire with assistance from a doctor or nurse, in the context of a rheumatology clinic, would in itself act as an educational experience for them. Details included age, sex, name and dose of NSAID, duration of treatment, significant concomitant medication, e.g. steroids or gastroprotective agents. Four key questions were asked:

- did they know NSAIDs could cause 'abdominal discomfort', 'vomiting of blood', 'black motions'?
- did they know that if they experienced such side-effects, NSAIDs should be stopped and reported to the doctor?
- did they know NSAIDs should be taken with meals?
- where did they receive such information?

Results

In total 32 males and 63 females were included. Ages ranged from 20 to 91 years (mean 52.6). The commonest NSAID was diclofenac (38; 40%), followed by

ibuprofen (17; 18%). Nine were on an NSAID for 0 to 6 months, 11 from 6 months to 1 year, 29 from 1 to 5 years, 19 for more than 5 years, five for many years (not specified) and 22 not recorded. Seven also took mesoprostol, five omeprazole, one lansoprazole, one Rennies, five ranitidine, one cimetidine and five prednisolone. Seventy-seven were on no other significant medication.

Sixty-one (64.2%) knew the possibility of 'abdominal discomfort', but 34 (35.8%) did not. Thirty-three (34.7%) knew 'vomiting blood' to be a side-effect, 62 (65.3%) did not. Thirty-two (33.7%) knew the side-effect of 'black motions', 62 (65.3%) did not, and one (1%) did not comment. Sixty-two (65.3%) would stop if these side-effects occurred, 25 (26.3%) said they would not, and eight (8.4%) did not comment. Eighty-five (89.5%) knew the importance of taking NSAIDs with meals, nine (9.5%) did not, and one (1%) did not comment (see Table 1). Patients also reported a wide variety of information sources. For example, many learnt information from a leaflet enclosed with the medication or from the prescribing doctors (see Table 2). No apparent differences existed in knowledge between males and females or the brand of NSAID being taken.

Conclusion

The conclusions that can be drawn from this short patient survey are limited by two main factors. Firstly, the small numbers involved make the findings less convincing than if larger numbers were included. Secondly, since the study population was specifically that of a rheumatology outpatient setting, it is not possible to simply extrapolate these findings to the general population without acknowledging the potential for variation. Having said this, considering these patients had not only been seen by their own general

Table 1 Patient knowledge of NSAID gastrointestinal side-effects

Patient knowledge	Yes *n* (%)	No *n* (%)	No comment *n* (%)
Abdominal discomfort	61 (64.2)	34 (35.8)	0
Vomiting of blood	33 (34.7)	62 (65.3)	0
Black motions	32 (33.7)	62 (65.3)	1 (1.0)
Should stop NSAID	62 (65.3)	25 (26.3)	8 (8.4)
Take NSAID with meals	85 (89.5)	9 (9.5)	1 (1.0)

Table 2 Information sources

Source	Number	%
Non-specific doctor	11	11.6
Information leaflet with medication	39	41
Did not remember being told	1	1
General practitioner	20	21
Pharmacist	4	4.2
Consultant	11	11.6
Television	1	1
Radio	1	1
Nurse training	2	2.1
General knowledge	1	1
No comment	15	15.8

practitioner, but also by a rheumatology team, it would be expected that their knowledge of potential ADRs would be greater than in the general population.

This survey suggests that many rheumatology outpatients taking an NSAID are unaware of the GI side-effects and, alarmingly, especially in view of the long duration of treatment for many patients (at least 19 patients in this survey took NSAIDs for more than five years), would not stop them if such occurred, and report to a doctor. Only a small number of these patients were on concomitant gastroprotective agents. It is likely that this would also be the case in primary care. Therefore, it is important for patients on NSAIDs to be better informed and so less likely to suffer severe GI side-effects.

This survey highlighted that the main information sources of potential ADRs for patients are either the prescribing doctor, or the information leaflet contained with the medication. Patients are likely to read the information leaflet contained with the drug for a number of reasons. Many now take an active interest in their own health needs and medication. Perhaps they have had adverse effects previously and are now more cautious about commencing another medicine. Another reason may be a desire to reinforce what was said during the consultation with their doctor. Although it is reassuring to know that patients do read the contained information leaflets and listen to the prescribing doctor's advice, it is somewhat disturbing that so few were actually aware of the potential GI side-effects of NSAIDs.

Though patients do forget more than 50% of doctor-given information, Pendleton (1981) demonstrated that patients remember the majority of important information.[8,9] Therefore, it is important for those prescribing an NSAID, including those in primary care, as with any medication, to clarify with the patient the potential side-effects, confident that such important information is likely to be remembered by the patient.

Again, although patients did read the information leaflets, few picked up on, or retained the importance of GI side-effects. Since patients do read such information leaflets, perhaps a separate information sheet, aimed solely at explaining NSAID side-effects and recommended action if complications occur – stop NSAID and contact medical staff – would be a useful addition to the consultation when an NSAID is first prescribed. This may in turn reduce NSAID GI side-effects. Another possible intervention to increase patient awareness would be to attach this important information to the medication box or bottle itself. It has been shown previously that a sticker attached to the medication bottle, warning of potential drug complications, can increase patients' awareness of potential side-effects in the short term.[10]

In summary, NSAIDs are widely prescribed and can have serious GI side-effects. This short survey has shown that a number of patients taking these medications may be unaware of these complications. It is important that patients are made aware of these side-effects, and that they know what to do if they occur. Further study would be useful in this area.

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Received 26 January 2006
Accepted 31 March 2006