How to change NSAID prescribing

So far, this series has discussed the evidence for strategies to minimise the gastrointestinal risk associated with non-steroidal anti-inflammatory drugs. In this final article, Fiona MacRae, Lisa MacKenzie, Kenneth McColl and David Williams look at how to implement change.

Non-steroidal anti-inflammatory drugs are effective drugs in controlling inflammatory conditions, but have been listed as the best recognised cause of iatrogenic disease in the UK, with their most widely recognised adverse effects being on the upper gastrointestinal (GI) tract. Evidence-based strategies to minimise GI risk and improve overall prescribing habits exist and should be applied in practice.

Throughout this article, “NSAID” refers to traditional NSAIDs such as naproxen. The term “coxib” refers to both cyclo-oxygenase-2-selective (eg, meloxicam) and COX2-specific (eg, celecoxib) agents. This does not imply equivalent safety profiles within the groups.

The examples given in this article have been drawn from facilitation and medication review projects run in Greater Glasgow Primary Care Trust.

Interventions

Many opportunities exist to improve patient care and minimise GI risk in patients taking NSAIDs.

Dose minimisation

A common approach to reducing NSAID-associated GI risk is to minimise the NSAID dose. This can be achieved by:

- Reviewing anti-platelet doses of aspirin in excess of 75mg daily
- Encouraging the lowest possible dose of NSAID (or coxib) to control pain
- Encouraging 

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“or pulse” dosing (2-3 weeks’ therapy to manage episodes of inflammation) rather than regular dosing (but note that this is unsuitable for modified release preparations, which should be reviewed in the absence of morning stiffness or compliance problems)

- Providing a concurrent supply of paracetamol or compound analgesic to support anti-inflammatory dose reduction

Choosing the safest drug

As previously discussed (see PJ, 14 February, pp187–9), some agents have better evidence of GI safety than others. In the course of an anti-inflammatory review, pharmacists may wish to:

- Encourage the preferential use of ibuprofen over other traditional NSAIDs
- Discourage the use of “less safe” agents (eg, piroxicam and azapropazone)
- Consider the weaker GI outcome data supporting some of the COX2-selective agents (eg, meloxicam) versus the newer COX2-specific agents (eg, rofecoxib)

Targeting high-risk patients

Risk reduction is particularly important in high-risk individuals. These people can be identified systematically using a locally accepted definition of “high risk” (a definition can be devised if there is none) or a formal risk assessment tool, such as that shown in Figure 1 (p250). This tool was adapted from a validated risk assessment method, called “GI SCORE”. Before local use the content and appropriateness of such a tool must be discussed and agreed with GPs, the PCT and secondary care experts. In general, high-risk patients should be offered a simple or compound analgesic as an alternative to their anti-inflammatory drug. If anti-inflammatory treatment is to continue, high-risk patients should:

- Receive either a coxib or an NSAID plus effective gastroprotectant (eg, misoprostol 800µg daily, omeprazole 20mg od, lansoprazole 30mg od)
- Receive the lowest possible dose of anti-inflammatory to control pain (see the “dose minimisation” approach described above)
- Understand the ongoing risk associated with therapy (current strategies only reduce risk by 50 per cent)

Reviewing concurrent aspirin therapy

Concurrent aspirin therapy increases GI risk for NSAID users and reduces or negates the GI benefits of coxibs. Ideally, the continued need for concurrent aspirin plus anti-inflammatory therapy should be reviewed and the following actions considered:

- Discontinue any aspirin used for primary prevention if the risk of coronary heart disease is <15 per cent at 10 years
- Replace the NSAID or coxib with a simple or compound analgesic
- Consider switching from a coxib plus aspirin to NSAID plus aspirin plus proton pump inhibitor (PPI), if there is local support for change

As a minimum, follow the dose minimisation approach described above.

Reviewing coxib use in low-risk patients

On the basis of cost-effectiveness (see PJ, 14 February, pp187–9) coxib use in low-risk patients may not be justified. Using a locally accepted definition of “low risk” or existing validated risk assessment tools such patients can be identified. If there is local support for change, it may be possible to switch these patients from coxibs to NSAIDs, if simple or compound analgesics are not an option.

Reviewing co-prescriptions for coxibs and proton pump inhibitors

Evidence suggests that coxibs are as effective at minimising GI risk as NSAIDs plus PPIs. Low-risk patients receiving a coxib plus a PPI for another reason (eg, reflux) could, therefore, be switched to an NSAID plus PPI, if there is local support for change. Reviewing concurrent PPI cover in high-risk individuals receiving coxibs is more controversial (see PJ, 21 February, pp219–21).

Fiona MacRae, MPhil, MRPharmS is a prescribing support pharmacist for Greater Glasgow Primary Care Trust, Lisa MacKenzie, MRCP, is a specialist registrar in rheumatology at Glasgow Royal Infirmary, Kenneth McColl, FRCP, is professor of gastroenterology at the Western Infirmary, Glasgow, and David Williams, FRCP, is consultant gastroenterologist at Dr Gray’s Hospital, Elgin.

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Identify knowledge gaps

1. List three interventions you could make to minimise NSAID-related gastrointestinal risk.
2. How would you explain to a patient the need for a review of his or her anti-inflammatory therapy?
3. What tools are available for measuring the impact of a change in NSAID prescribing?

Before reading on, think about how this article may help you to do your job better. The Royal Pharmaceutical Society’s areas of competence for pharmacists are listed in “Plan and record,” (available at: www.rpsgb.org/education). This article relates to “drug therapies” and “supporting evidence-based practice” (see appendix 4 of “Plan and record”).
Managing NSAID-induced dyspepsia

It should be remembered that although dyspepsia is a poor predictor of NSAID-induced ulcers or complications, minimising dyspepsia will be important for the patient. The following strategies can be tried:

- Discontinue the NSAID if it is no longer needed
- Reduce the NSAID dose to the lowest level that achieves a therapeutic effect (dyspepsia is dose related)
- Switch to another NSAID (some NSAIDs may be better tolerated than others)
- Advise the patient to take the NSAID with food
- Consider concurrent therapy with an antacid, H₂ antagonist or proton pump inhibitor (PPI)
- Switch to a coxib (but remember that coxibs are only associated with a 2 or 3 per cent reduction in dyspepsia incidence compared with traditional NSAIDs)

Communicating the need for change

Even if there is overwhelming evidence for a prescribing change, it is vital that the need for change is communicated clearly.

Patients

When considering the options for improving anti-inflammatory prescribing, it is essential to take into account patients’ views. Many patients will be well-controlled from a pain perspective, have previously tried a wide range of other anti-inflammatories and simple or compound analgesics and, perhaps, believe that they are currently on the ‘safest’ combination of drugs for them. Other patients may have concerns about the efficacy of simple paracetamol or the ‘addictive’ nature of codeine-based products.

Effective communication with patients will enable them to buy into the review process and the rationale behind any change. Figure 2 provides an example of an invitation for medication review that was used in Glasgow. Such examples should only be used as a reference and appropriate adaptations made to allow for local needs.

Developing an information sheet to accompany a medication review invitation may also be valuable. In Glasgow, the type of information used to increase patient awareness of the need for change included facts such as:

- About half of all patients taking anti-inflammatories experience nausea or...
In patients over 65 years, the chance of stomach upset and about 40 per cent will develop stomach ulcers, but may not even be aware they have them.

■ The most serious problems associated with anti-inflammatories (bleeding or burst ulcers) usually develop without warning and, therefore, an absence of symptoms does not mean an absence of risk altogether.

■ Overall, anti-inflammatories quadruple the risk of a bleeding ulcer compared with no therapy.

■ The safest options open to prescribers at the moment (ie, choosing a coxib or prescribing a stomach protective medicine in addition to an NSAID) only reduces the risk of stomach problems by about 50 per cent (ie, no strategy eliminates the risk of stomach problems).

In some cases, it may also be useful to explain why you have targeted particular patient groups for review (eg, the elderly and those with a history of peptic ulcer disease or receiving concurrent aspirin). The impact of increasing age on GI risk, for example, has been quantified within a Bandler article as follows:

■ In patients over 65 years, the chance of experiencing a bleeding ulcer due to a standard anti-inflammatory in any one year is about one in 600 (the chance of dying as a result is about one in 3,400).

■ In patients over 75 years, the chance of experiencing a bleeding ulcer due to a standard anti-inflammatory in any one year is about one in 110 (the chance of dying as a result is about one in 650).

Lastly, the information sheet may also be used to prepare patients for the types of questions that will be asked during the review. For example:

■ Is the NSAID still needed?
■ Could pain be managed just as well and more safely with a non anti-inflammatory painkiller? If not, is the patient on the lowest dose and the safest type of anti-inflammatory possible?
■ Does the patient need an additional stomach protective tablet?
■ Does the patient know the risk of continuing to take anti-inflammatories?

Prescribers All prescribers will be motivated to do the best for their patients and, as the Glasgow experience suggests, focusing on risk minimisation rather than cost-containment will more successfully engage them. Reviewing a random sample of case notes for patients receiving regular anti-inflammatory prescriptions is likely to identify a cohort of high-risk individuals being sub-optimally treated (eg, receiving a traditional NSAID without effective gastroprotection) and a cohort of low-risk individuals being over-treated (eg, receiving a coxib).

Discussing individual patient cases with prescribers is a powerful way of raising awareness of the need for change. Notably, an average GP is only likely to experience one patient with a serious or fatal GI bleed approximately once every decade. Discussing national statistics (in the UK, it has been estimated that approximately 2,000–2,500 patients per year may die as a result of NSAID-induced bleeding and perforation) may, therefore, be helpful. Higher than average use of anti-inflammatories by a particular practice (expressed as items per 100 patients in Scottish Prescribing Analysis or PACT data) can also be a useful way of engaging prescribers in dialogue.

There are many ways in which pharmacists can work with prescribers to optimise anti-inflammatory therapy. These include:

■ Offering to summarise and discuss the evidence base with prescribers in an educational environment as a result of ongoing audit (NSAID plus effective gastroprotection) can make a difference.

■ Agreeing opportunities for change that are acceptable to the practice and have support at local level, eg, PCT, secondary care experts.

■ Providing prescribers with access to paper or electronic methods of GI risk assessment to facilitate objective identification of patients at risk (see Figure 1).

■ Flagging case-notes to support opportunistic review.

■ Reviewing case notes and identifying and documenting opportunities for change on standardised audit forms (see Figure 3).

■ Sending out letters inviting patients for review and patient information (see Figure 2).

■ Seeing and reviewing patients in the context of pharmacist-led medication review clinics in either a surgery-based or community pharmacy-based setting.

Measuring the impact of any change

Some clinicians (and patients) may feel more confident about change if an objective measure of pain control is included in any intervention. An example of a practical pain score and visual analogue scale is given in Figure 4 (p252), but many more are available.

Pain can be assessed at the initial review and again, after any medication change has been implemented. A 50 per cent reduction in pain score is a good outcome.

Changes in prescribing costs (expressed, for example, as average cost per patient in Scottish Prescribing Analysis or PACT data) and trends in drug use (eg, the percentage of total anti-inflammatory prescribing accounted for by coxibs), or data summarised from case note review before and after the intervention (eg, the percentage of high-risk patients receiving either a coxib or an NSAID plus effective gastroprotection) can also be captured to support your work.

Conclusion

For clinicians, the challenge is to balance the risks and benefits presented by NSAIDs and there is much that pharmacists can do to support this. At the moment, the safest options available to clinicians (either prescribing NSAIDs plus evidence-based gastroprotectants or using one of the newer coxibs), reduce but do not eliminate GI risk. In many situations, reviewing the need for an anti-inflammatory prescription altogether is the most powerful intervention that can be made.

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support in developing the electronic risk assessment tool illustrated in Figure 1.

References and further information

Readers interested in tools to measure pain control objectively can contact Professor David McNaughton, Director of the Pain Management Research Centre, University of Abertay, at: D.McNaughton@abertay.ac.uk

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2. Present Pain Intensity (PPI):
Tick along the scale below to indicate the current intensity of your pain.

No pain _____________________________________Worst possible pain

3. Evaluation of overall intensity of pain experience:
Please place a check in the appropriate box, to indicate your overall intensity of pain experience.

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<th>1 Mild</th>
<th>2 Discomforting</th>
<th>3 Distressing</th>
<th>4 Horrible</th>
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Evaluate
For your work to be presented as CPD, you need to evaluate your reading and any other activities. Answer the following questions:
What have you learnt?
How has it added value to your practice? (Have you applied this learning or had any feedback?)
What will you do now and how will this be achieved?

Figure 4: Sample pain score: short-form McGill pain questionnaire