Criteria for selecting and using non-steroidal anti-inflammatory drugs in primary health care

C Llop, S Paredes and C Llor


Background. Numerous non-steroidal anti-inflammatory drugs (NSAIDs) are commercially available in Spain. This makes proper selection and use of these drugs difficult for GPs.

Objective. To find out the criteria which GPs use to choose among the drugs in this group and to evaluate other criteria related to the clinical management of NSAIDs.

Method. A survey questionnaire was distributed among all the GPs of the reformed network in the health area of Tarragona (Spain).

Results. The doctors questioned chose a limited number of NSAIDs. Major preferences were diclofenac and piroxicam. The main criteria for selection were: efficacy and safety of the drug; previous and/or current gastrointestinal pathology of the patient; the difference between acute and chronic use; and the type of inflammatory process. There were a large number of combinations of routes of administration. The histamine H$_2$ antagonists were the prophylactic drugs which were used most for gastropathy.

Conclusion. Sometimes the main criteria for choosing between the drugs in this study do not reflect the drugs that are used in clinical practice. Some of the criteria used by GPs for selecting and using NSAIDs should be reviewed.

Keywords. Drug use, NSAID, primary care.

Introduction

Nowadays, in Spain, there are 37 systemic and 17 topical non-steroidal anti-inflammatory drugs (NSAIDs). During 1997, NSAIDs were the third most prescribed drugs. Many factors are involved in the selection of a particular drug. However, not many studies attempt to assess the criteria, which depend on the beliefs and attitudes of practitioners, for prescribing different pharmacological groups. This study examines the criteria which GPs use to select a particular NSAID. It also looks at other collateral criteria that are taken into account in the clinical management of these drugs. Knowledge of these criteria plays a fundamental role in the design of programmes to improve the quality of the prescriptions.

Methods

A questionnaire with eight questions and closed responses was designed and sent to all GPs in the reformed primary health care network in the Tarragona Health District (Catalonia, Spain) between January and June 1997. Sixty per cent of the primary health care structures in Catalonia are now part of this reformed network, which handles ~260 000 people. All the GPs in this reformed network were contacted to explain the methodology and objectives of the study.

The questions asked were:

1. How many different NSAIDs do you usually use in your practice?
2. Which three do you use most?
3. What drug-related criteria most affect your selection?
4. What patient-related criteria most affect your selection?
5. What combinations of administration routes do you use?
6. Which drugs do you prefer to prevent NSAID-associated gastropathy?
7. What sources of information about drugs do you use to find out about NSAIDs?
8. What is the normal follow-up time for determining possible adverse effects?

Each question explained the number of answers required or allowed.

Results

Of the 183 questionnaires sent, 152 were answered (83.06%). For those questions with a limited number of responses, the whole question was considered null if more responses than the number allowed had been given. Unanswered questions were also considered to be null.

Table 1 shows the results of the questions expressed as the number of responses, as well as the number of null responses.

Discussion

The results demonstrated that although many factors can affect selection, only a small number of drugs are selected. These data coincide with previous studies which considered that 10–15 NSAIDs would be a reasonable number from which to select.2

In our study, there were five factors which most influenced the selection of one drug from the group: efficacy; safety; antecedents and/or gastrointestinal pathology of the patient; acute or chronic process; and the type of inflammatory process.

Efficacy and safety have a high interrelationship with the priority factors related to the patients. Nevertheless, as far as safety criteria are concerned, the use of certain drugs can be questioned. Experience shows that, in comparison with other NSAIDs, piroxicam seems to cause many gastrointestinal complications.3 The NSAID which is considered to be the safest, ibuprofen,3 is the fourth most used.

The number of responses that support the use of topic–oral and parenteral–oral routes seems excessive, due to little evidence about the advantages of the topical use of NSAIDs and the fact that the parenteral route can improve the results achieved with the oral route alone in only a few situations in primary health care.

The most widely co-prescribed anti-ulcer drugs were the histamine H₂ receptor antagonists, although only famotidine had been effective at preventing gastric and duodenal ulcers and ranitidine seems to be effective only in preventing duodenal ulcers.4 Although misoprostol is recognized as being the drug that is the most effective in preventing gastroduodenal ulcers,5 it is not often used by GPs, probably because of its considerable number of side effects. Other gastroprotecting drugs are uniformly used by half of the doctors surveyed, although at the time of the survey there were few studies that demonstrated that they were effective.

This study shows that despite the fact that GPs stated that medical journals are their main source of drug information, several criteria used to select NSAIDs should be reviewed. Some aspects that can be improved are the considerable number of combinations of administration routes, the habits of selecting co-prescribed prophylactic anti-ulcer drugs and, above all, the use of drugs that have many gastrointestinal side effects instead of the safest NSAID.

References

### TABLE 1  Results of the questionnaire survey

<table>
<thead>
<tr>
<th>Question</th>
<th>Answers allowed</th>
<th>More than 100</th>
<th>75–100</th>
<th>50–75</th>
<th>25–50</th>
<th>0–25</th>
<th>Null/UA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No. of NSAIDs used</td>
<td>One</td>
<td>Up to five (104)</td>
<td>Six to ten (43)</td>
<td>More than ten (1)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Drug-related criteria that most affect the selection</td>
<td>Three required</td>
<td>Efficacy (138)</td>
<td>Safety (126)</td>
<td>Price (42)</td>
<td>Route of administration (39)</td>
<td>Dosage (39)</td>
<td>Scientific information (18)</td>
</tr>
<tr>
<td>4. Patient-related criteria that most affect the selection</td>
<td>Three required</td>
<td>GI pathology (123)</td>
<td>Acute/chronic process (87)</td>
<td>Type of inflammatory process (56)</td>
<td>Age (49)</td>
<td>Renal/hepatic pathology (46)</td>
<td>Concomitant medication (41)</td>
</tr>
<tr>
<td>7. Sources of information</td>
<td>Up to two</td>
<td>Medical journals (116)</td>
<td>Advertising (64)</td>
<td>Discussion with colleagues (30)</td>
<td>Specialist criteria (16)</td>
<td>Others (10)</td>
<td>6</td>
</tr>
<tr>
<td>8. Time to follow-up</td>
<td>One</td>
<td>Up to 1 week (56)</td>
<td>Up to 2 weeks (36)</td>
<td>Up to 1 month (24)</td>
<td>Up to 2 weeks (36)</td>
<td>Up to 3 months (5)</td>
<td>Up to 6 months (0)</td>
</tr>
</tbody>
</table>

Numbers in parentheses are the number of responses. UA = unanswered; GI = gastrointestinal.