A Clinical Audit Of The Prescribing Of Cyclooxygenase-2 Selective Inhibitors In A Guilford General Practice

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Citation

Abstract
Non-steroidal anti-inflammatory drugs (NSAIDs) are one of the most widely prescribed groups of medicines in clinical practice. They are particularly useful in the treatment of rheumatoid arthritis (RA) and osteoarthritis (OA), because of their anti-inflammatory, analgesic and ant-pyretic properties. The recently available cyclo-oxygenase 2 (COX-2) selective inhibitors for arthritic treatment imparts an essential means of reducing gastrointestinal (GI) adverse effects (2), but this new class of drug is not recommended for routine use in patients with RA or OA.

The aim of this study was to audit prescribing of COX-2 inhibitors at St Luke's Surgery, Guilford, with the purpose of describing and measuring the nature and extent to which non-adherence to the NICE guidelines occurs.

INTRODUCTION
Non-steroidal anti-inflammatory drugs (NSAIDs) are one of the most widely prescribed groups of medicines in clinical practice. They are particularly useful in the treatment of rheumatoid arthritis (RA) and osteoarthritis (OA), because of their anti-inflammatory, analgesic and ant-pyretic properties. In spite of this, they have a number of serious side effects that included gastrointestinal toxicities (1).

The recently available cyclo-oxygenase 2 (COX-2) selective inhibitors for arthritic treatment imparts an essential means of reducing gastrointestinal (GI) adverse effects (2), but this new class of drug is not recommended for routine use in patients with RA or OA (3).

National Institute for Clinical Excellence guidelines (July 2001) clearly indicate that they should only be used in preference to standard NSAIDs in OA or RA patients at high risk of developing serious gastrointestinal effects (4, 5).

The aim of this study was to audit prescribing of COX-2 inhibitors at St Luke's Surgery, Guilford, with the purpose of describing and measuring the nature and extent to which non-adherence to the NICE guidelines occurs.

METHOD
Twenty-seven patients who were under sixty-five years of age and who had received a repeat prescription of a COX-2 inhibitor within the last six months were included in this study. Data was collected from computerized patient records, using a standard proforma and the use of the patients written record file.

I used a read coded system (jA% for COX-2 selective inhibitors) and filter to eliminate patients older than sixty-five and patients who had not received medications within the last six months.

For each patient, the following was recorded:

1. Patient practice number
2. Surname
3. Forename
4. Age
5. Sex
6. Gastric ulcer in the past or present
7. Duodenal ulcer in the past or present
8. History of GI bleed
9. History of Gastro/Duodenal perforation
10. If patient was on any medications that cause upper GI problem e.g. Anticoags, steroids

The above information was compared to the recommendations of the NICE guidelines (1).

RESULTS

St Luke's Surgery has a list size of 9402 patients we found that there were 173 patients (1.04%) in the practice who had ever had a COX-2 selective inhibitor. 51 (29.48%) of these patients were under 65 years of age and 122 (70.52%) were older than 65. Of the 51 patients who had a COX-2 selective inhibitor and were under 65, only 27 had received a prescription of COX-2 selective inhibitor within the last 6 months.

Of these 27 patients, 7 (25.93%) were prescribed COX-2 selective inhibitor not in favor of the NICE guidelines recommendation. However the remaining 20 patients (74.07%) were prescribed a COX-2 inhibitor according to the NICE guidelines.

Of the 7 patients incorrectly prescribed a COX-2 selective inhibitor, 1 had had a previous GI bleed and 2 were on medications that cause upper GI problem (one was taking prednisolone and the other was on Warfarin therapy. The remaining 4 had contraindicated Comorbidity in accordance with the NICE guideline that included: Hypertension, Diabetes, CVA, Anal fissure and Angina.

DISCUSSION

The main area for which there is scope for improvement is in the prescribing of COX-2 inhibitors for patients with contraindicated age and co-morbidity, especially cardiovascular disease. According to the NICE guidelines, in patients with cardiovascular disease there remains uncertainty over the use of COX-2 inhibitors, therefore routine prescribing, in preference to standard NSAIDs, is not recommended (4, 5).

70.25% of patients in the practice receiving a COX-2 inhibitor were over 65 years of age and the use of this drug in this age group is not recommended by NICE.

Shemilt et al 2002 (6), stated that implementation of the NICE guidelines will depend upon the provision of education relating to the effective and appropriate prescribing of COX-2 inhibitors, together with guidance on the correct place of simple analgesics and non drug therapy.

A similar study by Cutts et al 2002 (7), carried out in Australia found similar result to my study, that COX-2 inhibitors were being prescribed for patients with multiple risk factors that may place the patient at increased risk of adverse drug reactions to a COX-2 inhibitor.

In Australia there have been a number of studies regarding COX-2 inhibitors and General Practice prescribing (7, 8). A number of these studies have unanimously agreed that patients on these drugs should be reviewed within the first few weeks of therapy to assess effectiveness, identify adverse effects and determine the need for ongoing therapy. Maybe this sort of regiment should be applied to St Luke's Surgery to improve the safe prescribing of COX-2 inhibitors?

The perception that COX-2 selective inhibitors offer improved safety and efficacy is common and is of a worrying concern amongst current General Practitioners. As a result of this false belief, the cost to the primary care organizations is considerable (9), so prescribing advise should be implemented to all practitioners that are likely to COX-2 selective inhibitors immediately.

References

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