ANALGESIC PRESCRIBING FOR PATIENTS DISCHARGED FROM AN ORTHOPAEDIC DEPARTMENT
Analgesic prescribing for orthopaedic patients

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Summary

Introduction: Uncontrolled postoperative pain is a major problem for functional recovery after orthopedic surgery. There is evidence that following patient discharge, moderate to severe pain is commonly reported early on and later in the postoperative period. The aim of the study was to analyze analgesic prescription habits at discharge of patients who went through surgery on the orthopedic department. The second aim was to determine if there are any disparities in the prescribed analgesics, depending on whether the operation was elective or traumatic. Methods: We performed a retrospective study including all patients who underwent surgery at the Clinic for orthopaedic surgery and traumatology over a 6 month period. The study included 371 patients. We recorded demographic data, discharge diagnoses, types of surgery and pain medications prescribed for use at home. Results: 87.9% patients received no analgesic prescriptions at all at hospital discharge. In the group of patients who have been recommended analgesics, analgesics were optionally prescribed in 3.5%, whilst NSAIDs were prescribed for 8.6% patients. No patients received paracetamol or opioid analgesics. There were no statistically significant differences in prescribed analgesics depending on whether the operation was elective or posttraumatic. Conclusion: Results of this study show that doctors in our clinical setting underestimate the importance of the necessity to manage acute postoperative pain, especially in terms of prescribing opioids when needed. These findings emphasize the need for further research, education and guidelines in this area, as well as better access to the use of opioids.

Key words: analgesia, orthopaedic surgery, postoperative pain

Original article

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Methods

We performed a retrospective investigation including all patients that underwent surgery at the Clinic for orthopedic surgery and traumatology, Clinical Center of Serbia, over a 6 month period (starting January 1, 2012 through to June 30, 2012). All information was gained by examining the discharge lists.

Measured Variables

We recorded patient demographics (age and gender). In addition to the selected discharge diagnoses and types of surgery, we recorded pain medications prescribed for use at home. Prescribed pain medications were placed in the following categories: 1) no pain medication, 2) optionally prescribed pain medication, 3) prescribed pain medication (non-opioids (paracetamol, nonsteroidal anti-inflammatory drugs (NSAIDs)) or opioids). We divided surgery into two categories: (1) elective surgery and (2) posttraumatic surgery.

Data Analysis

We used descriptive statistics to describe the patient population, diagnoses, types of surgery and medications prescribed. We tested for associations between types of surgery and medication prescribed using the chi-square test.

Results

The study sample included 371 patients who met the eligibility criteria. The average age of our patients was 57.40 ±20.27 years; 162 (43.67%) were male and 209 (56.33%) were female. Elective surgery was performed in 128 (34.5%), while surgery following trauma was performed in 243 (65.5%) patients.

Discussion

In this study we focused on the habits of orthopedic surgeons regarding analgesics prescription upon discharge from the acute setting. To the best of our knowledge, there is a limited amount of studies that investigate analgesic prescription habits for discharged patients following orthopedic surgery.  

Table 1 shows pain medications prescribed to patients at discharge from the hospital. 326 (87.9%) patients received no analgesic prescriptions at all at hospital discharge. In the group of patients who have been recommended analgesics, optionally prescribed analgesics were prescribed in 13 patients (3.5%), whilst doctors prescribed NSAIDs for 32 (8.6%) patients. No patients received paracetamol or opioid analgesic prescriptions in our study group.

Table 1. Analgesic prescribing at discharge

<table>
<thead>
<tr>
<th>Analgesic prescription at discharge</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No pain medication</td>
<td>326 (87.9%)</td>
</tr>
<tr>
<td>Optional</td>
<td>13 (3.5%)</td>
</tr>
<tr>
<td>Paracetamol</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>NSAIDs</td>
<td>32 (8.6%)</td>
</tr>
<tr>
<td>Opioids</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

Table 2 reveals analgesic prescribing patterns based on type of surgery. The great majority of patients who underwent surgery received no pain medication prescriptions at discharge, while a small proportion of patients in each group received NSAIDs at discharge. There were no statistically significant differences in analgesics prescription habits depending on whether the operation was elective or posttraumatic.

Table 2. Analgesic prescribing at discharge home by type of surgery

<table>
<thead>
<tr>
<th>Type of surgery</th>
<th>Analgesic prescribing at discharge</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No pain medication</td>
<td>Optional</td>
</tr>
<tr>
<td>Elective</td>
<td>115 (89.9%)</td>
<td>3 (2.3%)</td>
</tr>
<tr>
<td>Posttraumatic</td>
<td>211 (86.8%)</td>
<td>10 (4.1%)</td>
</tr>
<tr>
<td>Σ</td>
<td>326 (87.9%)</td>
<td>13 (3.5%)</td>
</tr>
</tbody>
</table>
For the majority of discharged patients in our study (87.9%) analgesics were not prescribed. Among patients who have been prescribed analgesic therapy none were prescribed opioids and paracetamol. NSAIDs were prescribed to 8.6%, while analgesics were optionally prescribed to 3.5% of the patients. In addition, we found no differences in prescribing habits depending on the type of surgery that was performed.

Our results clearly reveal that there is no habit of prescribing analgesics by our orthopedists at the time of discharge. Analgesic prescription rates vary according to different studies, but generally all of them reported higher rates of prescribed analgesics as well as higher opioid prescription rates. None of the patients in our study were prescribed an opioid, whereas other studies have shown that among patients who received analgesics opioids were the most commonly prescribed class of pain medication. Aslam et al. reported that even in developing countries many used opioids in treating pain. According to a study done on 1,000 patients in a tertiary health institution in Pakistan paracetamol was the most frequently prescribed analgesic (34%) followed by NSAIDs (30.6%), opioids (26.3%) and aspirin (17.5%). Petrack at al. reported that among 120 adult patients with long bone fractures 85% received a discharge analgesic prescription, including 64% who received an opioid. A further study of 166 adults with extremity fractures reported a significantly lower rate of analgesic prescription (28%) compared to previously mentioned studies, including a lower rate of opioid prescriptions (17%).

Insufficient analgesic prescription can be explained in different ways. First, it might be a consequence of lack of awareness of importance of adequate pain management. Travis et al. also believe that pain management takes low priority in many developing countries. Second, there may be a lack of knowledge about how to effectively and safely manage postoperative pain. Inadequate and sparse analgesic prescription might be a consequence of lack of postoperative pain management guidelines. Also, due to potential adverse side effects of NSAIDs, it is possible that OTC medications were occasionally recommended, rather than prescribed.

It is evident from our results that orthopedic physicians in our setting fear prescribing opioids. Despite their recognized effectiveness, opioids are often not freely available because of restrictive laws based on fear of misuse and abuse. According to literature, these excessive regulations are the major barrier to adequate acute pain control in developing countries. In the last decade the International Narcotics Control Board (INCB) has published data showing that the developed world accounts for 87% of global opioid consumption, whereas the developing countries (where four-fifths of the world’s population resides) account for only 13% of global opioid consumption. Furthermore, the price might be one of the reasons for low prescribing rates. Opioid drugs are up to 10 times more expensive in the developing world than in the developed world.

Our study has some limitations. Since the investigation was conducted in a single academic institution, the results may not be applicable to all practice settings. Results of this study raise the question whether doctors in our clinical setting are aware of the importance of writing specific analgesics and emphasize the need for further research, education and guidelines in this area. We must provide better access to potent analgesic drugs through amendment of restrictive laws and change barriers that result from lack of education regarding pain and pain medications. Educational initiatives are needed to address misconceptions about opioids among health care workers and the general public.

References

7. Segerdahl M, Warren-Stomberg M, Rawal N, Brattwall M, Jakobsson J. Clinical practice and routines for day


