The aim of this project was to explore the quality of pain management practices in a cohort of Danish post-operative patients by exploring patients’ pain experience and the associated processes of pharmacological treatment of pain.

**Background**

Multi-modal pharmacological pain treatment and responsiveness to breakthrough pain are fundamental to effective pain management in the acute post-operative period.

Variability in pain assessment and poorly controlled pain and have implications for patient outcomes in terms of physiological, psychological and long term patient recovery as well as the potential to increase length of stay in hospital.

**Method**

Participants underwent gynaecological, gastrointestinal, orthopaedic or urological surgery at a regional hospital in western Jutland, Denmark.

Pain experience and treatment data were collected between 24 and 72 hours of surgery via the Revised American Pain Society Patient Outcome Questionnaire and medical record audit.

Consecutive patients were interviewed about their pain experience in the previous 24 hours and the pharmacological treatment of pain they received during that period. Pain experience was calculated as a ratio of the amount available through strict and PRN prescriptions and the amount actually administered over the same 24 hour period.

**Results: Patient pain experience**

<table>
<thead>
<tr>
<th>Gastrointestinal patients</th>
<th>Orthopaedic patients</th>
<th>Gynaecological patients</th>
<th>Urological patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n = 124)</td>
<td>(n = 66)</td>
<td>(n = 42)</td>
<td>(n = 57)</td>
</tr>
<tr>
<td>Female (n)</td>
<td>63 (50.8%)</td>
<td>41 (62.1%)</td>
<td>42 (100%)</td>
</tr>
<tr>
<td>Age (µ, SD)</td>
<td>59.9 (16.6)</td>
<td>60.4 (15.4)</td>
<td>52.7 (15.2)</td>
</tr>
</tbody>
</table>

Patients’ ratings of their pain intensity over the prior 24 hour period are described in Figure 1. Patients indicated a wide range of intensity scores for current pain and worst pain. The mean worst-pain ratings were within a moderate to severe range (>3 pain severity). Patients’ ratings of the interference of pain intensity on activity and mood are described in Figure 2.

**Pain management**

The pharmaceutical management of pain is presented in Figure 3 as the ratio of available analgesics administered to patients who experienced moderate to severe pain (>3) or zero to mild pain according to class of analgesic.

**Significance**

There was evidence of multi-modal prescription of analgesics available for this cohort of postoperative patients.

Although rest pain was well managed, there was a significant proportion of patients who experienced moderate to severe pain (>3) as their worst pain experience in the previous 24 hours.

The experience of moderate to severe pain was similar across the four surgical groups.

Despite the variable distribution of pain intensity, patients did not receive a correspondingly higher proportion of their available analgesics if their pain intensity was higher.

These findings strongly suggest the need for a better understanding of the factors associated with pain assessment and management of postoperative breakthrough pain.

**Acknowledgements**

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