14AP2-5

Effect of spinal opioids on PCA morphine requirements following major abdominal surgery

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Background and Goal of Study: For analgesia following major abdominal surgery, spinal opioids offer an attractive alternative to thoracic epidurals and are being increasingly used in this area for their parental opioid-sparing effects. The aim of this study was to evaluate the effect of spinal opioids on post-operative morphine requirements in patients undergoing major open abdominal surgery in our hospital.

Materials and Methods: Over a 12-month period (01/04/2010-31/03/2011), we retrospectively analysed our acute pain database for all ASA 1-4 patients undergoing surgery involving a midline laparotomy incision. Data analysed included: patient demographics; PCA duration; 0-24h, total morphine dose; and use of spinal opioid. Patients on opioids prior to surgery, and patients with non-standard PCA prescriptions or who received additional forms of analgesia were excluded. All patients received PCA morphine post-operatively as a standard prescription (1mg IV bolus, 5-min lockout, no continuous infusion) plus regular paracetamol. Spinal opioid was administered intrathecally as 0.2-0.3mg of preservative-free morphine prior to induction of anaesthesia.

Results and Discussion: 232 patients met the inclusion criteria. 202 received PCA morphine alone, 30 received spinal opioid and PCA. Data is expressed as median values (IQR) or percentages, “no spinal opioid” vs “spinal opioid”. Demographic profiles were similar: age 61 (48-70) vs 67 (55-74) yr; males 44.6% vs 53.3%. The majority of patients were ASA 2-3. Morphine requirements - Table 1.

<table>
<thead>
<tr>
<th>No spinal opioid (n=202)</th>
<th>Spinal opioid (n=30)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PCA Duration (h)</strong></td>
<td>45 (30.8-69.6)</td>
<td>47 (18.2-96.4)</td>
</tr>
<tr>
<td><strong>Morphine dose 0-24h (mg)</strong></td>
<td>96 (55-90)</td>
<td>48.5 (33.5-71.5)</td>
</tr>
<tr>
<td><strong>Total morphine dose (mg)</strong></td>
<td>89 (49.5-163.5)</td>
<td>99.5 (65.5-160)</td>
</tr>
</tbody>
</table>

(Table 1 - Morphine requirements)

Spinal opioids are well established in orthopaedic and obstetric anaesthesia, where they provide good analgesia for 24 h post-operatively. A recent meta-analysis suggested that patients undergoing abdominal surgery receive the same benefit [1], however only two of the trials included looked specifically at major laparotomies. Our results are contrary to this - we found no significant difference in PCA morphine requirements following spinal opioid compared to PCA alone.

Conclusion: The evidence supporting the use of spinal opioids following major abdominal surgery is relatively small. Further, larger trials are required in order to fully establish their role in this area.


14AP2-6

Comparison of intravenous boluses of piritramide and morphine. Did we use the correct ratio of analgetic potency?

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Background and Goal of the Study: After replacement of intravenous piritramide by morphine for postoperative analgesia, we got the impression that, using the morphine, it took more time to reach an adequate level of analgesia. Methods: Adult patients for routine gynaecological surgery, or for laparoscopic cholecystectomy, were included. All patients received the same form of general anesthesia. On arrival in the postoperative care unit (PACU), pain scores were registered using the Visual Analogue Scale (VAS). With VAS > 3, the patient received piritramide or morphine, administered intravenously using a blinded syringe, which was prepared in the hospital’s pharmacy. The starting dose was 5 mg of piritramide, or 3.5 mg of morphine. This ratio is based on the analgetic potency of piritramide compared to morphine, which is presumed to be 0.7. An additional dose of piritramide 3.5 mg, or morphine 1.75 mg was administered, if 15 minutes after injection VAS still was > 3. Four additional dosages could be administered. The protocol was finished when the patient had reached VAS ≤ 3.

Results and Discussion: Of the 182 patients, who have participated in the study, 22 patients were excluded as they were completely pain free on arrival.

14AP2-7

Comparison of morphine versus morphine plus bolus tramadol for postoperative analgesia in morbidly obese patients

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Background and Goal of Study: In morbidly obese patients, PCA with morphine has been proven to be an acceptable strategy for postoperative pain management. However, this patient population is at great risk for respiratory depression, the most serious complication of morphine PCA. Unlike morphine, tramadol has no clinically relevant effects on respiratory parameters at recommended doses in adults. The aim of this study is to determine the morphine-sparing effects of tramadol and to evaluate the effects on opioid-related adverse effects in obese patients after major abdominal surgery.

Materials and Methods: The study was conducted on 168 ASA 1-3 patients with BMI > 30kg/m2 who underwent major abdominal surgery after the end of surgery. Study end points included morphine consumption over the first 48 hr after surgery, quality of pain control measured by visual analogue pain scale (VAS) six hourly, incidence of opioid side effects including nausea and vomiting, sedation, pruritus and/or respiratory depression and patient satisfaction after 48 hr.

Results and Discussion: Both Groups were similar with respect to age, body mass index and gender. Patients obtained adequate analgesia with both regimens (VAS < 4). Average morphine usage during the day of surgery (DOS) was 45.125± 3.4 mg for Group A and 33.37±5.09 mg for Group B. On first and second postoperative days (POD1 and POD2) morphine consumption differed statistically significantly between groups (POD 1: 46.875± 2.99 mg for Group A and 34.37±5.09 mg for Group B. p = 0.004, POD2: 41.625± 2.615 mg for Group A and 31.25± 15.06 mg for Group B). Tramadol deescalated the total morphine needs 29% (133.75± 8.31% for Group A and 98.75±15.06 for Group B p=0.027). Arterial gases and viral signs were maintained without significant changes. Nausea, vomiting and sedation scores were the same in both groups.

Conclusion(s): In morbidly obese patients, tramadol combined with PCA morphine induced a significant morphine-sparing effect, while it did not alter the incidence of opioids side effects after major abdominal surgery.

14AP2-8

Assessment of the effect of Dexmedetomidine in the management of postoperative pain when combined with fentanyl in the patient-controlled analgesia

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Background and Goal of Study: The aim of this study is to evaluate the opioid sparing effect of dexmedetomidine when added to patient-controlled analgesia (PCA) and satisfaction with postoperative analgesia.

Materials and Methods: In this double-blinded, randomized, controlled study, 40 patients undergoing open colectomy were allocated to receive ei-