The Analgesic Efficacy of Diclofenac Suppository in Parturients after Caesarean Section

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Background

Pethidine Injection:
Foremost pain relief method for post Caesarean Section
What is the Effect of Opioid?

Mother – Side Effect
- Sedation
- Nausea
- Vomiting

Baby - Transfer of Opioid Drug thro’ Breast Milk
- Depressed Neurobehavioral Score
- Hinder Infant-mother Interaction
- Hinder Newborn’s feeding behaviour
What is Multimodal Analgesia?

Combines Various Groups of Medication for Pain Relief

- Local anesthetic
- Opioids
- NSAIDs
- Acetaminophen
- Alpha-2 agonists

Different Modes of Action
Post-Caesarean Pain

Somatic Pain
  ◦ Opioid is useful

Visceral Pain
  ◦ NSAID is useful
Olofsson et al 2000

- Pain intensity significantly reduced in the diclofenac group during the first 3 hour postoperatively
- Reduced 39% opioid administration in diclofenac group

Cumulative morphine consumption is statically reduced after 3 hours postoperation in study group.
Multimodal Analgesia

Our unit starts to give Diclofenac suppository (NSAID) in May 2016 if there is no medical contraindication
Nevertheless, the local experience on the opioid-spacing effect of Diclofenac suppository has not been reported.
Objectives

This study aims at evaluating the analgesic efficacy of diclofenac suppository given to parturients after Caesarean Section
Methodology

Retrospective study

All the medical records of parturients who had undergone Caesarean Section from March to May 2016 were reviewed

Subjects used Patient Controlled Analgesia (PCA) infusion pump were excluded for analysis

Analyses were performed by using SPSS (version 22.0) statistical software
## Mode of Anaesthesia

<table>
<thead>
<tr>
<th>Parity – Nulliparous</th>
<th>General Anaesthesia (N=48)</th>
<th>Regional Anaesthesia (N=154)</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>25 (52.1%)</td>
<td>73 (47.4%)</td>
<td>0.344</td>
</tr>
<tr>
<td>Maturity – Term</td>
<td>38 (79.2%)</td>
<td>144 (93.5%)</td>
<td>0.10</td>
</tr>
<tr>
<td>Type of Caesarean</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section - Emergency</td>
<td>36 (75.0%)</td>
<td>87 (56.5%)</td>
<td>0.027</td>
</tr>
<tr>
<td>Voltaren Suppository</td>
<td>17 (35.4%)</td>
<td>72 (46.8%)</td>
<td>0.112</td>
</tr>
</tbody>
</table>
Compare of 2 Groups on the Requisition of Opioid Injection

<table>
<thead>
<tr>
<th></th>
<th>With Diclofenac suppository + Opioid Injection</th>
<th>Without Diclofenac suppository + Opioid Injection</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Anaesthesia</td>
<td>14.6% (7/48)</td>
<td>52.1% (25/48)</td>
<td>0.007</td>
</tr>
<tr>
<td>Regional Anaesthesia</td>
<td>31.8% (49/154)</td>
<td>47.4% (73/154)</td>
<td>0.001</td>
</tr>
</tbody>
</table>
### Results – RA

<table>
<thead>
<tr>
<th></th>
<th>With Diclofenac suppository</th>
<th>Without Diclofenac suppository</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received Pethidine Injection</td>
<td>31.8% (49/154)</td>
<td>47.4% (73/154)</td>
<td>0.001</td>
</tr>
<tr>
<td>Interval - end of operation &amp; first opioid injection (Hrs)</td>
<td>7.72±5.55</td>
<td>5.28±4.88</td>
<td>0.012</td>
</tr>
<tr>
<td>Total dosage of opioid injection received (mg)</td>
<td>151.5±65.8</td>
<td>190.1±98.5</td>
<td>0.018</td>
</tr>
</tbody>
</table>
## Results - GA

<table>
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<tr>
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<td>0.007</td>
</tr>
<tr>
<td>Interval - end of operation &amp; first opioid injection (Hrs)</td>
<td>12.6±9.12</td>
<td>8.60±6.20</td>
<td>0.305</td>
</tr>
<tr>
<td>Total dosage of opioid injection received (mg)</td>
<td>139.29±67.5</td>
<td>222.00±117.55</td>
<td>0.029</td>
</tr>
</tbody>
</table>
Conclusion

Our result indicated that for those parturients under regional anaesthesia with Diclofenac suppository after Caesarean Section was effectively in opioid-sparing, delaying the time of injection and reducing total dosage of opioid requested by parturients.
Limitation

Retrospective Study

- Pain Score
- Side-effect
- Breastfeeding behaviour
Acknowledge

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Ms. NG Wai Ying Judy (DOM/O&G/PMH)