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Opioid Consumption After Scheduled Cesarean Delivery Following Implementation of Enhanced Recovery After Surgery

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Findings

Table 1: Patient Characteristics (N=978)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Pre-ERAS (n=466)</th>
<th>Post-ERAS (n=514)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>31.1 (±5.5)</td>
<td>31.1 (±5.5)</td>
<td>p=0.30</td>
</tr>
<tr>
<td>BMI</td>
<td>32.9 (±7.3-38.2)</td>
<td>33 (±23.8-38.3)</td>
<td>p=0.09</td>
</tr>
<tr>
<td>Gestational Age (Weeks)</td>
<td>39 (±3.2-2)</td>
<td>39 (±3.1-1)</td>
<td>p=0.50</td>
</tr>
<tr>
<td>1 Min APGAR Score</td>
<td>8 (±1)</td>
<td>8 (±1)</td>
<td>p=0.70</td>
</tr>
<tr>
<td>5 Min APGAR Score</td>
<td>9 (±1)</td>
<td>9 (±1)</td>
<td>p=0.71</td>
</tr>
<tr>
<td>Prior Cesarean Delivery</td>
<td>40.5% (n=188)</td>
<td>44.7% (n=230)</td>
<td>p=0.18</td>
</tr>
<tr>
<td>Multiple Birth</td>
<td>2.2% (n=10)</td>
<td>1.4% (n=7)</td>
<td>p=0.34</td>
</tr>
</tbody>
</table>

Gravida

1: 24.4% (n=113) 30.4% (n=156) p=0.07
2: 52.4% (n=243) 47.6% (n=246) p=0.52
3: 23.3% (n=108) 21.8% (n=112) p=0.62

Parity

0: 34.3% (n=150) 38.9% (n=200) p=0.23
1: 55.2% (n=256) 52.1% (n=266) p=0.52
2: 10.6% (n=49) 8.9% (n=46) p=0.42

ASA

I: 87.1% (n=370) 83.8% (n=415) p=0.71
II: 18.1% (n=82) 16.2% (n=80) p=0.47

Table 2: Median Oral MME (N=978)

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Pre-ERAS (n=466)</th>
<th>Post-ERAS (n=514)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-24 hr</td>
<td>37.5 (±15.7-67.5)</td>
<td>37.5 (±15.5-64.6)</td>
<td>p=0.03</td>
</tr>
<tr>
<td>24-48 hr</td>
<td>45 (±28.3-82.5)</td>
<td>45 (±27.5-74.6)</td>
<td>p=0.01</td>
</tr>
<tr>
<td>48-72 hr</td>
<td>70 (±35.1-165)</td>
<td>71.3 (±30-127.5)</td>
<td>p=0.03</td>
</tr>
<tr>
<td>72-120 hr</td>
<td>60 (±23.6-112)</td>
<td>61.5 (±29.7-117)</td>
<td>p=0.07</td>
</tr>
<tr>
<td>120-240 hr</td>
<td>80 (±41.3-157.7)</td>
<td>81.5 (±42.8-159)</td>
<td>p=0.02</td>
</tr>
</tbody>
</table>

Figure 1: Cumulative Median Oral MME

The implementation of ERAS and use of multimodal analgesia led to a sustained MME decrease among women utilizing opioids post scheduled cesarean delivery.

Figure 2: Interrupted Time Series: Cumulative 72-Hour Median Oral MME

The pre-implementation group (n=464) utilized a median of 90 [IQR 37.5-165] oral MME while the post-implementation group (n=514) used 71.3 [IQR 30-127.5] median oral MME (p<0.01).

Discussion

The use of multimodal analgesia following scheduled cesarean delivery is an effective means of managing postoperative pain while also reducing the need for opioids.

References


