A retrospective study comparing the peri-operative analgesic requirements in morbidly obese adolescents undergoing laparoscopic versus robotic assisted gastric sleeve resection

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Background
- There are no definitive studies comparing the analgesic requirements in patients undergoing traditional laparoscopic surgery versus robotic-assisted laparoscopic surgery.
- The current study retrospectively reviews our experience and compares the intraoperative and postoperative analgesic requirements in morbidly obese adolescents undergoing laparoscopic versus robotic assisted laparoscopic bariatric surgery.

Methodology
- Institutional Review Board approval.
- Retrospective analysis of the medication administration records of all morbidly obese patients who underwent bariatric surgery at Nationwide Children’s Hospital.
- The collected data included intraoperative analgesic and adjuvant medications, postoperative analgesic requirements, and visual analog pain scores.
- The opioid analgesics administered were converted to morphine equivalents.
- A comparative analysis was performed using nonparametric Wilcoxon two-sample test

Results

<table>
<thead>
<tr>
<th></th>
<th>Laparoscopic</th>
<th>Robotic assisted</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>14</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Intraoperative morphine (mg/kg)</td>
<td>0.19 ± 0.06</td>
<td>0.15 ± 0.08</td>
<td>p= 0.024</td>
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<tr>
<td>72 hour cumulative morphine (mg/kg)</td>
<td>0.64 ± 0.25</td>
<td>0.68 ± 0.27</td>
<td>p= 0.782</td>
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<tr>
<td>Average postoperative pain scores</td>
<td>3.7 ± 1.26</td>
<td>3.0 ± 0.9</td>
<td>p=0.26</td>
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</tbody>
</table>

Conclusion
- Intraoperative opioid use was lower in the robotic-assisted group; however, this did not continue into the postoperative course.
- The postoperative opioid requirements and the postoperative pain scores were the same in both the groups.
- Overall no significant difference in the total perioperative opioid requirements or the pain scores were noted between the two groups.

References