Single centre experience of post-operative parenteral nutrition provision in patients undergoing cytoreductive surgery & heated intraperitoneal chemotherapy

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Sutton Coldfield
Cytoreductive Surgery ( CRS) & Heated Intraperitoneal Chemotherapy (HIPEC)

COMPLETE MACROSCOPIC TUMOUR REMOVAL

HEATED INTRAPERITONEAL CHEMOTHERPY
CRS & HIPEC

• What are the indications?
  • Pseudomyxoma peritonei
  • Peritoneal metastases from colorectal Ca
  • Malignant peritoneal mesothelioma
  • Peritoneal metastases from ovarian Ca/small bowel

• Median survival:
  • Improved by 16-24 months compared with chemotherapy alone.
  • Overall 5 year survival 30-45%
Current Situation in England – Specialist Commissioned Services For Colorectal peritoneal metastases
Post-operative nutrition support in CRS & HIPEC

• High likelihood of post-op ileus and delayed gastric emptying
• No agreed consensus on optimal post-op nutrition support
• Large variability in practice
  • Post-op PN on all
  • Selective PN provision
Post-op PN at Good Hope Hospital in CRS & HIPEC

• Decision to start PN is made intraoperatively

• Decision based on:
  • Prolonged surgery duration
  • ≥2 intestinal resections and anastomoses
  • Increased number and size of peritoneal nodules – Peritoneal Cancer Index (PCI)
  • Patients at nutritional risk

• Patients not started on PN are reviewed daily
  • PN started if resumption of oral intake delayed over 48hrs
Aims
• To describe our experience of post-operative PN provision in patients following CRS
• To evaluate the effect of not giving PN on clinical outcomes

Methods
• Review of prospectively collected database
• All patients undergoing CRS at Good Hope Hospital between January 2017 and December 2018
Results

- Demographics:
  - N=84 (58 females)
  - Median age = 58.5 yrs
  - All but 1 had HIPEC

- Primary tumour sites:
  - Colorectal, 59, 70%
  - Appendiceal, 18, 22%
  - Other, 7, 8%
Post-operative PN provision

• N=32 (38.1%)
• All but 3 started PN immediately post-op.
• Median duration on PN = 9.5 days (range 4 – 23)
• No significant difference in PN duration with different primary tumour sites (p >0.05)
<table>
<thead>
<tr>
<th>Characteristics</th>
<th>PN group (n=32)</th>
<th>Non-PN group (n=52)</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary tumour sites:</strong></td>
<td></td>
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<tr>
<td>Colorectal</td>
<td>25 (78.1%)</td>
<td>34 (63.0%)</td>
<td>0.14</td>
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<tr>
<td>Appendiceal</td>
<td>5 (15.6%)</td>
<td>13 (24.0%)</td>
<td>0.35</td>
</tr>
<tr>
<td>Other</td>
<td>2 (6.3%)</td>
<td>7 (13.0%)</td>
<td>0.33</td>
</tr>
<tr>
<td><strong>Surgery duration, range (median, hrs)</strong></td>
<td>7.3 (5 - 10.5)</td>
<td>5.3 (2.5 – 8.5)</td>
<td>0.001</td>
</tr>
<tr>
<td><strong>PCI scores, range (median)</strong></td>
<td>8.0 (3 - 30)</td>
<td>3.0 (2 – 25)</td>
<td>0.008</td>
</tr>
</tbody>
</table>
## PN vs Non-PN group – patient outcomes

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</thead>
<tbody>
<tr>
<td>Complications (Grade III/IV, %)</td>
<td>15.7</td>
<td>1.9</td>
<td>0.02</td>
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<tr>
<td>Length of stay, range (median, days)</td>
<td>13.5 (8 – 44)</td>
<td>8.0 (2 – 35)</td>
<td>0.001</td>
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<tr>
<td>30 day mortality (%)</td>
<td>0%</td>
<td>0%</td>
<td>NS</td>
</tr>
<tr>
<td>90 day mortality (%)</td>
<td>6.3%</td>
<td>1.9%</td>
<td>NS</td>
</tr>
</tbody>
</table>
Conclusions

• No current consensus on post-op PN provision in CRS
• CRS patients with less advanced disease and shorter operation times may not require post-op PN
• Prospective studies needed to explore role of nutrition support in CRS.
Thank you