Preoperative functional status is not associated with postoperative surgical complications in low risk patients undergoing esophagectomy

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Preoperative functional status is not associated with postoperative surgical complications in low risk patients undergoing esophagectomy

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Introduction

• Esophagectomy is associated with 60% of postoperative complications (POC).
• Preoperative physical activity and training decrease postoperative pulmonary and cardiac complications in major thoracic surgery.
• This has hardly been evaluated in patients undergoing esophagectomy.
• If there is an association with postoperative complications, patients could benefit from a tailored physiotherapeutic intervention.

Methods

Purpose

The aim of this prospective cohort study was to determine if preoperative functional status in patients with esophageal cancer is associated with POC.

Participants

From March 2012 to October 2014, 94 patients scheduled for esophagectomy (figure 1) at the outpatient clinic of a large tertiary referral center were eligible for the study.

Mean age (s.d.) was 63.8 years (9.4) and 74 patients were male.

Results

• Preoperative functional status was on average higher than predicted (table 1).

Results after multivariate analysis

Table 1: Preoperative functional status.

<table>
<thead>
<tr>
<th>Indicator of functional status</th>
<th>Mean (s.d.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IMS, median (i.q.r.)</td>
<td>42.2 (38.5)</td>
</tr>
<tr>
<td>Percentage of predicted IMS, mean (i.q.r.)</td>
<td>11.3 (4.2)</td>
</tr>
<tr>
<td>HGS (kilograms), median (i.q.r.)</td>
<td>40.5 (25.6)</td>
</tr>
<tr>
<td>Percentage of predicted HGS, mean (i.q.r.)</td>
<td>114.0 (20.8)</td>
</tr>
<tr>
<td>Physical activity (kcal/day), median (i.q.r.)</td>
<td>865.7 (797.5)</td>
</tr>
<tr>
<td>QoL, median (i.q.r.)</td>
<td>83.3 (19.7)</td>
</tr>
</tbody>
</table>

Table 2: Results after multivariate analysis.

• Despite high preoperative functional status, 55 patients developed a POC (61.1%) of which 32.2% were gastrointestinal and 19.1% pulmonary.
• 28 patients with POC developed more than one complication.
• 26 patients suffered from a grade 3a complication or worse (figure 3).

Discussion & Conclusions

• A high preoperative functional status
• A high rate of gastrointestinal complications, obviously unrelated to functional status.
• A relatively low percentage of pulmonary complications.

Recommendations

• Carefully assess the association between preoperative functional status and POC and relate this to patient- and surgery specific characteristics, before indicating a preoperative physiotherapy intervention.

References


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