Influence of inpatient dietary restriction on acute uncomplicated diverticulitis: A pilot observational study

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Influence of Inpatient Dietary Restriction on Acute Uncomplicated Diverticulitis
A Pilot Observational Study

Research Team: Megan Crichton, Camilla Dahl, Skye Marshall, Julie Jenkins-Chapman, Romina Nucera, Yvonne Chen, Kayla Russell, Sophie Mahoney
Background

Diverticulosis
Mega presence of Diverticula
Intestines

Diverticulitis
Inflammation and complications of Diverticula
Intestines
Bleeding

Sandler et. al. Gastroenterology, 2002; AIHW 2016
Background

• >152,000 annual hospitalisations
• Length of stay 3-4 days
• 1.5 million days of inpatient care
• Annual cost AUD$3.4 billion

Sandler et. al. Gastroenterology, 2002; AIHW 2016
Dietary manipulation is a core component of management
Research Question

What is the effect of inpatient prescription of liberalised diets compared with restrictive diets on hospital length of stay and 30-day diverticulitis reoccurrence?

Liberalised diet = solid food in ≤ 48 hours
Restricted diet = fasting/fluid only for ≥ 48 hours
Methods

10-week recruitment period
January - March 2017
Robina Hospital
Results: Recruitment

Admitted with acute diverticulitis (n=33)
- Ineligible (n=3)
  - Complicated diverticulitis (n=1)
  - Unable to give consent (n=1)
  - No CT diagnosis (n=1)
- Not included (n=3)
  - Discharged prior to contact (n=3)

Included in inpatient analysis (n=27)
- Lost to follow-up (n=6)
  - Unable to contact (n=4)
  - Unwilling to participate as unwell (n=2)

Restricted Diet (n=16)

Liberalised Diet (n=11)

Included in outpatient analysis (n=21)

3 per week
# Results: Baseline Characteristics

<table>
<thead>
<tr>
<th>Participant Characteristics</th>
<th>Restricted Diet (n=16)</th>
<th>Liberalised Diet (n=11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>54 ± 11*</td>
<td>65 ± 14*</td>
</tr>
<tr>
<td>Body Mass Index (kg/m²)</td>
<td>26.7 ± 3.3</td>
<td>27.6 ± 5.7</td>
</tr>
<tr>
<td>Presenting Temperature (°C)</td>
<td>36.8 ± 0.6</td>
<td>36.8 ± 0.7</td>
</tr>
<tr>
<td>Gender (female)</td>
<td>9 (56%)</td>
<td>8 (73%)</td>
</tr>
<tr>
<td>Ethnicity (Caucasian Australian)</td>
<td>11 (69%)</td>
<td>6 (55%)</td>
</tr>
<tr>
<td>Caucasian European</td>
<td>1 (6%)</td>
<td>3 (27%)</td>
</tr>
<tr>
<td>New Zealander</td>
<td>2 (13%)</td>
<td>2 (18%)</td>
</tr>
<tr>
<td>African</td>
<td>1 (6%)</td>
<td>0</td>
</tr>
<tr>
<td>Asian</td>
<td>1 (6%)</td>
<td>0</td>
</tr>
<tr>
<td>Cigarette Smoking (yes)</td>
<td>4 (25%)</td>
<td>2 (18%)</td>
</tr>
<tr>
<td>Exceeding ETOH Guidelines (yes)</td>
<td>4 (25%)</td>
<td>2 (18%)</td>
</tr>
<tr>
<td>History of Diverticulosis (yes)</td>
<td>5 (31%)*</td>
<td>9 (82%)*</td>
</tr>
<tr>
<td>History of Diverticulitis (yes)</td>
<td>4 (25%)</td>
<td>6 (55%)</td>
</tr>
<tr>
<td>Previous Admission (yes)</td>
<td>3 (19%)</td>
<td>5 (46%)</td>
</tr>
<tr>
<td>Admitted with Diarrhoea (yes)</td>
<td>6 (40%)</td>
<td>3 (27%)</td>
</tr>
<tr>
<td>Admitted with Constipation (yes)</td>
<td>3 (20%)*</td>
<td>7 (64%)*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inpatient Gastrointestinal Symptoms</th>
<th>Restricted Diet (n=16)</th>
<th>Liberalised Diet (n=11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total GSRS Score</td>
<td>8.9 ± 3.4</td>
<td>7.6 ± 3.0</td>
</tr>
<tr>
<td>Abdominal Pain</td>
<td>2 (0-4)</td>
<td>1 (1-3)</td>
</tr>
<tr>
<td>Reflux</td>
<td>0 (0-4)</td>
<td>0 (0-2)</td>
</tr>
<tr>
<td>Indigestion</td>
<td>3.9 ± 2.1</td>
<td>2.6 ± 1.6</td>
</tr>
<tr>
<td>Constipation</td>
<td>1.6 ± 1.3</td>
<td>1.5 ± 1.2</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td>0.5 (0-8)</td>
<td>2 (0-4)</td>
</tr>
</tbody>
</table>

* P<0.05

P>0.05

Towards a healthier Gold Coast
Gold Coast Health Research Week Conference
28 – 30 November 2017
Queensland Government
Queensland Health
BOND UNIVERSITY
BRINGING AMBITION TO LIFE
Results: Length of Stay

* $P = 0.031$ BUT small sample size, not precise
Results: Length of Stay

After accounting for smoking status and GSRS Score at baseline,

Liberalised diet decreased LOS by 1.1 days*  

(P=0.035)
## Results: Reoccurrence / GP Visits

<table>
<thead>
<tr>
<th></th>
<th>Restricted Diet Group (n=16)</th>
<th>Liberalised Diet Group (n=11)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reoccurrence</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>GP visits</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

\[ P > 0.05 \]
Take Home Message

A liberalised diet may be favourable compared to a restricted diet

BUT

a larger sample size and RCT is needed to strengthen confidence in findings.
Thank you

Questions?