The value of colonoscopy in isolated abdominal pain

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Background

- Abdominal pain is a commonly reported symptom in the general population

- 26% report pain on 6 or more occasions per year\(^1\)

- Most commonly reported symptom in patients undergoing colonoscopy\(^2\)
Background

- Abdominal pain correlates poorly with significant intra-colonic pathology (such as cancer or high grade polyps)
  - Systematic Review- Abdominal pain and cancer  DOR 0.7³

- Abdominal pain accounts for the 3rd most common referral to endoscopy clinics⁴
Background

- Limited data on the yield of colonoscopy in investigating abdominal pain
- No evidence in the Australian setting
- No evidence detailing the complications resulting from colonoscopy for abdominal pain.
Aim

• To assess the yield and complication rate of colonoscopies performed for isolated abdominal pain within an Australian regional hospital setting
Methodology

- Single center retrospective observational study

- Study Cohort:
  - All patients undergoing colonoscopy between December 2010 and May 2012

- Data collection
  - By lead and associate author
  - Chart review
  - Inclusion into study determined by lead author
Methodology

- **Inclusion Criteria:**
  - Elective referral for a colonoscopy for isolated abdominal pain (left/right/non specific)
  - +/- NHMRC Category 1 or 2 Family history
  - Complete Colonoscopy – appendiceal orifice +/- ileocaecal valve identified
  - Prep “good” or better
Methodology

• Exclusion Criteria:
  • Rectal Bleeding
  • Change in bowel habit
  • Weight loss
  • Prior history of colonic polyps or colorectal cancer
  • NHMRC Category 3 family history
  • Incomplete colonoscopy
  • Prep “Fair” or “Poor”
Methodology

• Primary End-points:
  • Diagnostic yield of colonoscopy in isolated pain
    • Cancer
    • Diverticulosis
    • Polyposis
    • Other pathology i.e. Inflammation etc.

• Secondary End-points:
  • Complications
Methodology

• Study control and oversight:
  • Data inclusion by Lead author only
  • Study supervisor input into design design and data analysis
  • Institutional review
    • Ethical Approval by Townsville Human Research Ethical Committee
    • Mackay Health Service Executive Board
Methodology

- **Statistical Analysis**:
  - Queensland Institute for Medical Research
  - Patients were grouped into age brackets (<50, 50-64, 65+)
  - Chi Square tests were used to identify variables related to yield of colonoscopy
  - Variables with a Chi square significance < 0.15 were included as predictors for binary logistic regression.
Results

Total Number of Colonoscopies
N=1164

Abdominal pain
N=244

N=920
(Other bowel symptoms)

Isolated Abdominal pain
N=55

N=189
(Pain + other bowel symptoms)
Results

- Average Age: 53.5 years (18-82)

- No significant pathology found
  - Cancer
  - Inflammatory bowel disease
  - High grade polyp

- 50.9 % of patients had a normal colonoscopy
Incidental Pathology

- Diverticulosis
- Polyp
- 1 adenoma
- 2 or more adenomas
- Hyperplastic
- Other
Polyps

- Hyperplastic
- 2 or more adenomas
- 1 adenoma
Relationship between age and normal colonoscopy
Relationship of Abdominal pain location to pathology

**All pathology**

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<thead>
<tr>
<th>Pain Location</th>
<th>Normal</th>
<th>Abnormal</th>
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<tbody>
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<td>Non-Specific Pain</td>
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<tr>
<td>Left Sided Pain</td>
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<td>Right Sided Pain</td>
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<td>Overall</td>
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**Diverticulosis**

<table>
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Relationship of Family History to Pathology

- No Family History
- NHMRC Class 1
- NHMRC Class 2
- Overall

- Normal
- Abnormal
Results

• Complications:
  • 1/55 patients suffered a perforation
  • Complication rate 1.8%
Conclusion

• Abdominal pain accounts for a significant proportion of referrals to the endoscopy clinic

• Investigation with colonoscopy appears to have limited yield.

• Investigation with colonoscopy is not without significant risk

• Suggest that colonoscopy should not be used as a first line investigation for isolated abdominal pain.
References


2. Who needs colonoscopy to identify colorectal cancer? Bowel symptoms do not add substantially to age or other medical history. B-A Adelstein, L Irwig et al Aliment Pharmacol Ther 2012 32:270-281
