The prevalence of irritable bowel syndrome-type symptoms in pediatric inflammatory bowel disease and the relationship with biochemical markers of disease activity

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Background

• The prevalence of IBS-type symptoms in adults with quiescent inflammatory bowel disease (IBD) is 35%1
• It is thought these symptoms may reflect ongoing inflammation
• Pediatric data are scarce

Aim

• To investigate the prevalence of IBS in children with IBD
• To investigate the relation of these symptoms with biochemical markers of inflammation

Methods

Cross-sectional study with all children (4-18 years) with a diagnosis of IBD attending our outpatient pediatric gastroenterology clinics (March 2014 - June 2015)

• Clinical disease activity (PUCAI, aPCDAI)
• Fecal calprotectin, C-reactive protein
• Physician-administered Rome III questionnaire for IBS criteria*

Clinical remission: PUCAI / aPCDAI <10
Biochemical remission: Fecal calprotectin <250 ug/g

IBS remission cutoff for children: ≥1.1

Abbreviations: aPCDAI; abbreviated Pediatric Crohn’s Disease Activity Index; CD: Crohn’s disease; CRP: C-reactive protein; FC: Fecal calprotectin; IBD: inflammatory bowel disease; IBS: irritable bowel syndrome; PUCAI: Pediatric Ulcerative Colitis Activity Index; UC: ulcerative colitis


IBS: clinical remission* (95% CI)

<table>
<thead>
<tr>
<th>CD + UC</th>
<th>CD</th>
<th>UC</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.4% (2.5 – 11.1%)</td>
<td>4.5% (1.1 – 9.2%)</td>
<td>10.8% (2.3 – 21.0%)</td>
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IBS subtypes

<table>
<thead>
<tr>
<th>IBS</th>
<th>%</th>
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<tbody>
<tr>
<td>D</td>
<td>63%</td>
</tr>
<tr>
<td>C</td>
<td>37%</td>
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IBS: biochemical remission* (95% CI)

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<th>CD+UC</th>
<th>CD</th>
<th>UC</th>
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<tr>
<td>16.1% (7.6 - 25.8%)</td>
<td>16.7% (6.5 - 29.9%)</td>
<td>10.8% (2.3 - 23.1%)</td>
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Conclusion

• The prevalence of IBS-type symptoms in children with IBD is much lower than in adults
• IBS-type symptoms are not related to biochemical markers of disease activity

IBS + / - : Fecal calprotectin

IBS + / - : CRP

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