Clinical patterns and outcomes of ischaemic colitis: Results of the Working Group for the Study of Ischaemic Colitis in Spain (CIE study)

Colonic ischaemia

- 70% of cases of GI ischaemic disorders
- incidence risen dramatically over past decades
- early recognition and diagnosis continue to be very low
- 8.1% had the diagnosis been considered upon admission*

*Sánchez AB et al. Clinical characteristics and outcome of ischemic colitis: a disease with a low index of suspicion at admission. Gut 2005:54(Suppl VII);A141.
Study Goals

• Is the pattern of CI clinically relevant?
• Variables to define subsets of patients who could benefit from early treatment?
• Do findings on diagnostic testing, validate current clinical recommendations?
Study design

- open, prospective, observational, descriptive, multicentre study performed in Spain 09/2005 – 03/2007
- 24 hospitals serving a population of 3.5 million
- admissions to GI / surgery and colonoscopy records reviewed daily
Patient Groups

1. Definitive CI
   – Colonoscopy or Laparotomy + Histology
   – Autopsy

2. Probable CI
   – Colonoscopy + negative Histology > 24-48h
   – CT if Colonoscopy contraindicated

3. Exclusion
   – No confirmation with above studies
Clinical Pattern

classification of Brandt and Boley:

• Reversible colopathy
• Transient colitis
• Chronic segmental ischaemia
• Gangrenous colitis
• Universal fulminant colitis
Management

Diagnosis
- history, PE, basic lab + stool, abdominal plain films
- Colo unprepared 48h, CT-scan if colo not advisable
- Angiography if AMI suspected

Therapy
- Bowel rest, iv fluids, TPN
- AB if moderate or severe presentation
- Surgery if massive bleeding, gangrene, perf., or universal fulminant colitis
Results

• 364 patients included (definite 76.3% / probable 23.6%)
• index of clinical suspicion in the ER 24.2%
Correlated Conditions

- Age (83% > 65, 32% > 80)
- Hypertension (63.2%)
- diabetes mellitus (27.2%)
- dyslipidaemia (28.6%)
- coronary artery disease (24.2%)
- congestive heart failure (11%)
- Constipation in last 30 days (24.5%)
- NSAIDs in last 30 days (31%)
# Clinical presentations vs clinical pattern

<table>
<thead>
<tr>
<th></th>
<th>Reversible Colopathy</th>
<th>transient colitis</th>
<th>Gangrene</th>
</tr>
</thead>
<tbody>
<tr>
<td>abdominal pain, imperative defecation, bloody diarrhoea</td>
<td>56.8%</td>
<td>49.1%</td>
<td>25%</td>
</tr>
<tr>
<td>Rectal bleeding</td>
<td>93.7%</td>
<td>84.9%</td>
<td>30.6%</td>
</tr>
<tr>
<td>Acute abdominal pain without rectal bleeding</td>
<td>5.3%</td>
<td>12.6%</td>
<td>58.3%</td>
</tr>
<tr>
<td>Peritoneal signs</td>
<td>4.3%</td>
<td></td>
<td>36.1%</td>
</tr>
</tbody>
</table>
### Clinical presentations vs anatomic segment

<table>
<thead>
<tr>
<th>Condition</th>
<th>Non-IRCI</th>
<th>IRCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal pain, imperative defecation, bloody diarrhoea</td>
<td>49.5%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Rectal bleeding</td>
<td>93.7%</td>
<td>30.6%</td>
</tr>
<tr>
<td>Peritoneal signs</td>
<td>2.9%</td>
<td>36.4%</td>
</tr>
</tbody>
</table>
Laboratory findings

Statistically significant gradient -> IRCI / gangrene

- WBC > 15,000/ml
- Hb < 120g/L
- Albumin < 28 mg/dL
Colonoscopy

- completed to the cecum in 58.9%
- erythema (83.7%)
- oedema (69.9%)
- friability (42.6%)
- Superf. ulcerations (including ‘single-stripe sign’ 57.4%)
- deep ulcerations (21.7%)
- stenosis (8.4%)
- gangrene (5.5%)
Timing of colonoscopy

- within first 48 h: typical haemorrhagic nodules 47.1%
- 2 and 5 days: 33.3%
- After day 5: 9.7%
Clinical patterns

- 26.1% reversible colopathy
- 43.7% transient colitis
- 17.9% chronic segmental ischaemic colitis
- 9.9% gangrene
- 2.5% universal fulminant colitis
Clinical outcomes and mortality

- Reversible colopathy and transient colitis: 3.1% (causes not directly related to CI)
- Chronic segmental ischaemic colitis (follow up 6 months: 4.6%)
- Gangrenous colitis (n=36): 30.5%
- Universal fulminant colitis (n=9): 100%
Discussion

• Provided a structured correlation of clinical patterns with prognosis, basis for the Guidelines
• Low index of suspicion for CI
• “Classic” presentation (pain, desire to defecate, bloody diarrhea) lacks clinical value
• value of early colonoscopy (<48h): a fundamental and safe diagnostic test
Discussion

Independent RF for unfavorable outcome (death/surgery):

• abdominal pain without rectal bleeding
• non-bloody diarrhea
• peritoneal signs
• Hb <12 g/dl