Pathology of Inflammatory Bowel Disease
From Presentation to Surveillance

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Saturday April 2, 2016, 11-11:45 AM
Arizona Society of Pathologists, Tucson, AZ
Disclosure

Nothing to disclose

Practice-based presentation
Outline

Confident diagnosis of IBD at the time of presentation

Gross and microscopic features of UC and Crohn’s

Classifying IBD (indeterminate and overlapping)

Surveillance in IBD (inactive, flare, dysplasia, pouch)

Polyps in IBD (inflammatory, DALM, sporadic adenoma)
IBD at Presentation

Initial diagnosis is crucial

IBD is a clinicopathological diagnosis
……and neither purely histological nor purely clinical

Two step process:
IBD > other conditions
If it is IBD – then classify IBD
Use every available information........
(clinical, endoscopic, imaging,
lab data – ESR, CRP, fecal calprotectin)
Diseases that famously mimic IBD

- Recurrent /severe acute infectious colitis
- Lymphogranuloma Venereum (LGV) or Chlamydia
- Diversion colitis (inflammation in bypassed colon)
- SCAD (Segmental colitis associated with diverticulosis)
- Severe allergic or eosinophilic colitis
- Behcet’s syndrome (oral/genital ulcers, ocular, HLA B51)
30 M presents with 3 weeks of rectal bleeding
Sigmoidoscopy and biopsies
One week later full colonoscopy showed Kaposi in cecum. Serology was positive for HIV and Chlamydia trachomatis.

Lymphogranuloma venereum proctosigmoiditis is a mimicker of inflammatory bowel disease.
SCAD (Segmental colitis associated with diverticulosis)
Long standing allergic or eosinophilic colitis mimics IBD
Clinical aspects of IBD at presentation

Chronicity (temporal, *not* histological)

Characteristic presentations
- UC - Bloody diarrhea (acute infectious trigger)
- Crohn’s (may show atypical presentation)
- Perianal disease, fistula, TI thickening

Endoscopy – loss of vascular pattern, friability, aphthous ulcers, cobblestoning

Family history (5-10% patients have FH)
Endoscopic features of UC
Endoscopic features of Crohn’s
Endoscopic features of Crohn’s
Endoscopic features of Crohn’s
Complex perianal disease in Crohn’s
Microscopic features of active UC
Microscopic features of active UC
Gross features of UC
Microscopic features of Crohn’s
Microscopic features of Crohn’s
Microscopic features of Crohn’s
Gross features of Crohn’s
Gross features of Crohn’s
Classifying IBD

Ulcerative colitis

Crohn’s disease

Indeterminate IBD (try to clarify)

Overlapping:

  Synchronous (UC – left colon, Crohn’s proximally)
  Metachronous (‘Neo-Crohn’s’ post UC colectomy)
Clarifying Indeterminate IBD

Cecal patch (UC)

Rectal sparing (still likely UC)

Focally enhancing gastritis (Crohn’s)

Thickened TI on imaging (Crohn’s)

Complex perianal disease (Crohn’s)
Cecal patch is a sign of ulcerative appendicitis manifested in the region of appendiceal orifice and not Crohn’s colitis.
Focally enhancing gastritis associated with Crohn’s
Surveillance in IBD

Inactive or quiescent IBD (remission)

Acute flare (relapse – IBD or infectious?)

Flat (invisible) dysplasia (new SCENIC guidelines)

Ileo-anal pouch assessment (post-colectomy)
Inactive ulcerative colitis (remission)
Inactive or quiescent IBD (deep remission)
Acute flare – ulcerative colitis relapse
Acute flare due to CMV infection
Acute flare due to C. Diff infection
Acute flare due to C. Diff infection
C. DIFF TOXIN PCR

Status: Final result (Collected: 3/16/2016 9:02 AM)

Specimen Information
Specimen Source: Stool
NPN ID: 169042890

Collected: 3/16/2016 9:02 AM

Component Results

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<th>Value</th>
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<td>DETECTED</td>
<td>(A)</td>
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Comment:
Surveillance for flat dysplasia in IBD

Flat (invisible) dysplasia - Bxs every 10 cm x4
Paradigm Shift in Surveillance in IBD

Traditional surveillance methods do not take into account the advances in endoscopic techniques (high definitional endoscopy and chromoendoscopy)

Dysplasia is generally visible and can be targeted

CONSENSUS STATEMENT

SCENIC International Consensus Statement on Surveillance and Management of Dysplasia in Inflammatory Bowel Disease

Loren Laine,¹,² Tonya Kaltenbach,³ Alan Barkun,⁴ Kenneth R. McQuaid,⁵ Venkataraman Subramanian,⁶ and Roy Soetikno,³ for the SCENIC Guideline Development Panel
Surveillance for Colorectal Endoscopic Neoplasia Detection and Management In IBD patients: International Consensus Recommendations (SCENIC)
Surveillance for Ileoanal pouch dysfunction
Pouch cavity (ileal mucosa) may show non-specific (infectious) pouchitis.

If ileal mucosa away from the pouch (afferent limb) is sampled, it may show normal ileum, nonspecific ileitis or ‘neo-crohn’s’.

Pouch cavity (ileal mucosa) may show non-specific (infectious) pouchitis.

If rectal cuff is sampled (retroflexion) it shows rectal mucosa with ongoing active ulcerative colitis.
Neo Crohn’s: Aphthae and fissures in proximal AL (>10 cm), and UC in reviewed colectomy >1 yr ago
Polyps in IBD

Inflammatory polyps or pseudo-polyps

Dysplastic polyp
(DALM – dysplasia associated lesion or mass)

Sporadic adenomatous polyp in an IBD patient
Inflammatory polyps in ulcerative colitis are mucosal and have exudates.
Inflammatory polyps in Crohn’s are mixed epithelial-mesenchymal, clustered and compact.
Dysplasia Associated Lesion or Mass (DALM)
Sporadic adenoma in a patient with IBD
<table>
<thead>
<tr>
<th><strong>Sporadic adenoma</strong></th>
<th><strong>DALM in IBD</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Any duration of IBD</td>
<td>IBD usually &gt;10 yrs</td>
</tr>
<tr>
<td>Age &gt;40</td>
<td>Any age</td>
</tr>
<tr>
<td>In uninvolved or inactive mucosa</td>
<td>In involved/active mucosa</td>
</tr>
<tr>
<td>Morphologically sporadic-appearing</td>
<td>Morphologically DALM-like</td>
</tr>
<tr>
<td>Managed like usual adenomatous polyp</td>
<td>Managed like DALM</td>
</tr>
</tbody>
</table>
Summary

IBD is a clinicopathological diagnosis that can usually be confidently diagnosed and correctly classified.

Surveillance of IBD includes patients in remission, acute inflammatory flare and invisible dysplasia.

A paradigm shift in surveillance is occurring (SCENIC) – dysplasia maybe visible.

Polyps in IBD include inflammatory polyps, DALM and sporadic adenomatous polyps.