The Case:

HPI: 51-year-old woman with Chronic Hepatitis C, Rheumatoid Arthritis, and Fibromyalgia presented with subsaceous progressive joint pain and hematochezia. Three months prior to admission, she noticed intensifying lower abdominal pain and diarrheal episodes up to six times daily and nightly, also with intermittent leakage of bloody mucous per rectum and tenesmus. Two weeks prior to admission she developed asymmetric, polyarticular, crescendo joint pain. She denied any fevers, rashes, photosensitivity, or oral ulcers.

PMHx:

Medications:
- 1. Chlorpropamid 80mg po daily
- 2. Doxepin 100mg po daily
- 3. Ibuprofen 800mg po q6hrs
- 4. Pregabalin 50mg po TID
- 5. Tramadol 100mg po q6hrs prn pain

Physical Exam:
- Abd: Soft, tender abdomen in the lower quadrants, left > right. Rectal exam exquisitely tender with gross BRB. M/S: She has tenderness over multiple joints, synovitis of the right MCPs, tenosynovitis over dorsum of the right hand, and enthesitis of the anterior tibial fibular insertions bilaterally. No rheumatoid nodules or gross joint abnormalities.

Labs:
- CBC with mild anemia and CMP within normal limits.
- ESR: 244nm/hr. Anti-SS-A: <0.2. HCV PCR.
- CRP at 3.4 mg/dL. Anti-CCP: 17. HCV PCR.
- Anti-CCP: 17. Anti-DS: <0.2. Cytochalin: Stool cultures were negative.

Differential Diagnosis of Polyarthritides:
- Rheumatoid Arthritis
- Enteropathic Arthritis
- SLE
- Psoriasis Gout
- Polyarthritis
- Undifferentiated Polyarthropathy
- Erosive Inflammatory OA
- Dysgammaglobulinemia
- Seronegative Polymyalgia
- Polyneuropathy
- Spondyloarthropathies

Hospital Course:
- Patient presented with severe joint pain and continued hematochezia. Colonscopy and surgical pathology confirmed the diagnosis of ulcerative colitis with concomitant enteropathic arthritis, despite abnormal serologies. Cognitive errors likely contributed to the delay in diagnosis, delay in proper referral, inappropriate lab ordering and treatment, as well as misinterpretation of tests in this case.

Treatment: Initiation of sulfasalazine and prednisone significantly improved symptoms and the patient was discharged with follow-up gastroenterology clinic.

Learning Points:

Cognitive Errors

- Anchoring Bias: Tendency to lock to salient features too early and failing to adjust to later data.
- Confirmation Bias: Tendency to seek confirming evidence above disconfirming evidence.
- Premature Closure: Accepting a diagnosis prior to full verification and working up.
- Diagnosis Momentum: Sticky diagnostic labels.
- Feedback Sanction: Considerable lapse in time before an error may be discovered.
- Vertical Line Failure: Lack of lateral thinking.

Prior PCP likely victim of confirmation bias by neglecting to confirm rheumatoid diagnosis with CCP, and accepting common diagnosis early in the workup.

Confirmation Bias Tendency to seek confirming evidence above disconfirming evidence

Premature Closure

Admitting team at high risk for momentum as historical incorrect diagnosis on presentation.

Diagnosis Momentum

Admitting team at risk for anchoring due to multiple positive serologies on admission despite inconsistent physical exam.

Vertical Line Failure

High prevalence of rheumatoid set prior PCP up for bias, as most polyarthritic presentations likely rheumatoid, and so there was a tendency to diagnosis this because odds were for it.

Interpretation of Serologies in GI associated Polyarthritides

<table>
<thead>
<tr>
<th>Serology</th>
<th>Sensitivity</th>
<th>Specificity</th>
<th>LR+</th>
<th>LR-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anti-DSNA</td>
<td>79%</td>
<td>73%</td>
<td>2.9</td>
<td>0.29</td>
</tr>
<tr>
<td>Anti-CCP</td>
<td>93%</td>
<td>57%</td>
<td>2.1</td>
<td>0.12</td>
</tr>
</tbody>
</table>

Rheumatoid Arthritis:

- In patients with at least 1 joint with synovitis and this condition not better explained by another disease process, the ACR 2010 diagnostic criteria can be used.
- RE: ***Specificity very dependent on underlying population. Lower prevalence tested populations show much higher specificity.

Rheumatoid Factor False Positives

- Viral, Bacterial, Parasitic Infections
- Pulmonary Disease
- Malignancy

Rheumatoid Arthritis: A clinical diagnosis: Fluctuations of asymmetric polyarthritis in the setting of IBD.

ANA* 93% 57% 2.1 0.12

Other

References: