Joint Session Digestive Diseases Pathology
Infectious Diseases Pathology
Infectious lesions of the GI tract: new entities and pitfalls

Case 4
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I have nothing to disclose
Case history

- 38-year-old male presented with abdominal pain and constipation of 10 days duration
- Active smoker 20 packs-year
- Alcohol consumer on weekends
- Smokes cannabis occasionally
Case history

- **Health history:** No food or drug allergies
  - 2011: HIV +. Untreated for 3 years (last CD4 469 cell/µL)
  - Hepatitis C virus (HCV)
  - 2 spontaneous pneumothorax:
    - 2011-drainage; 2015-lung bullous resection+pleural abrasion

- Rectal touch: anterior anal fisure
Colonoscopy

- Normal right and transverse colonic mucosa
- Sigmoid colon with aftoid lesions
- Rectum with eritematous mucosa

- Biopsies: right colon and sigmoid-rectal mucosa
Right colon
Right colon biopsies

- Normal mucosa
- Edema and slight chronic inflammation, no IEL, no parasites, no, no, no...

- Or...

- Do something else considering the clinical history of the patient
Right colon
Right colon

Warthin starry
IHC: Treponema pallidum (Biocare/PP153AA)
Right colon

Treponema pallidum (Biocare/PP153AA)
Right colon

Treponema pallidum (Biocare/PP153AA)
Right colon - Diagnosis

Right colon:

• Colon mucosa with edema and discrete chronic infiltrate in lamina propria. Presence of filamentous spirochetous-like microorganism on the surface epithelium, compatible with **colonic spirochetosis**
Non-Treponema spirochetes in the normal oropharynx and gastrointestinal tract microbiota cross-react with the anti-\textit{Treponema pallidum} antibody (Biocare/PP153AA), potentially contributing to a misdiagnosis.
Immunostaining for *Treponema pallidum*: Caution in its Evaluation

*Am J Dermatopathol* • Volume 32, Number 5, July 2010

- Acid alcohol resistant bacilli

Bronchial biopsy
*Mycobacterium tuberculosis*

*Mycobacterium marinum*

Granulomatous dermatitis

Polyclonal rabbit antibody. Biocare Medical, Concord, CA
Immunostaining for *Treponema pallidum*: Caution in its Evaluation

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- Helicobacter pylori / corkscrew + Giemsa+
Unexpected Immunostaining of *Mycobacterium leprae* With a Polyclonal Antibody Against *Treponema pallidum*

None of the patients showed clinical or analytical signs of leuetic infection

*Am J Dermatopathol* • Volume 34, Number 5, July 2012
The *Treponema pallidum* rabbit polyclonal antibody (Biocare Medical, Concord, CA) has been shown to recognize antigens from:

- other spirochetes
- *Mycobacteria* (*tuberculosis, marinum, leprae*)
- *Escherichia coli*
- *Helicobacter pylori*
Colonic spirochetosis

- Caused by the Gram-negative bacteria (nontreponemal spirochetes) *Brachyspira aalborgi* (humans & higher primates) or *Brachyspira pilosicoli* (humans & animals)
- No endoscopic findings or minimal, unespecific
- Presence of filamentous basophilic, fringe-like, on the surface epithelium of the large intestine or appendix (+WS, Giemsa, PAS, TP IHC)
- More common in immunosupressed patients /HIV+, (MSM), developing world
- Asymptomatic, abdominal pain, diarrhea. It can be invasive
- Not always treated/comensal – metronidazole/patogenic
- In vulnerable patients, look for other pathogens!
Sigmoid-distal rectum biopsies
Treponema pallidum (Biocare/PP153AA)
Treponema pallidum (Biocare/PP153AA)
Sigma and rectum:

- Acute colitis with erosions and presence of *spirochetes* on the surface epithelium
- Presence of filiform structures in glandular crypt epithelia and lamina propria, suggestive of *Treponema Pallidum*

Comment: The morphological features are suggestive of a *Treponema pallidum* infection, but must be correlated with the clinical and pathological context of the patient. Confirmative analytical and serological test are needed to establish a diagnosis.
- **Serology**

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<th>VIROLOGIA</th>
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<tr>
<td>RNA v.hepatitis C. Quantitatiu</td>
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<tr>
<td>Prova reagínica lues. VDRL</td>
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<td>IgM Prova treponêmica de Lues; sèrüm</td>
<td>Positiu</td>
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Diagnosis - Treatment

- Colonic spirochetosis + syphilis

The patient was treated and is doing well
Take-home messages

- **Beware** of subtle findings in “normal colon mucosa” / “rule out microscopic colitis”

- **Pro-active search** for additional pathogens in vulnerable patients

- Spirochetosis can occur in immunocompetent patients, look for it

- **Caution** when evaluating a positive immunostaining for *T. pallidum*, especially out of a clinical context of syphilis. Morphology is important-corkscrew + additional stains
Thank You!