Sex, Lies, and Gastrointestinal Tract Biopsies

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Primary and Secondary Syphilis — Rates of Reported Cases by Region, United States, 2008–2017

Rate (per 100,000 population)

Year

West
Midwest
Northeast
South


72.7%
Objectives

• Summarize epidemiologic trends in sexually transmitted infections (STIs)
• Discuss clinical presentation of sexually transmitted proctitis
• Discuss histologic features of sexually transmitted proctitis, including those distinguishing them from IBD
• Recognize clinical and pathology overlap with IBD and neoplasia
Syphilis — Rates of Reported Cases by Stage of Infection, United States, 1941–2017

NOTE: Data collection for syphilis began in 1941; however, syphilis became nationally notifiable in 1944. Refer to the National Notifiable Disease Surveillance System (NNDSS) website for more information: https://wwwn.cdc.gov/nndss/conditions/syphilis/.
Primary and Secondary Syphilis — Reported Cases by Sex, Sexual Behavior, and HIV Status, United States, 2017

ACRONYMS: MSM = Gay, bisexual, and other men who have sex with men (collectively referred to as MSM); MSW = Men who have sex with women only.
Gonorrhea — Estimated* Rates of Reported Gonorrhea Cases by MSM, MSW, and Women, STD Surveillance Network (SSuN)†, 2010–2017

* Estimates based on interviews among a random sample of reported cases of gonorrhea (N=17,765); cases weighted for analysis.
† Sites include Baltimore, Philadelphia, New York City, Washington State, San Francisco, and California (excluding San Francisco).

NOTE: Data not available for 2014; 2013–2015 trend interpolated; trends lines overlap for MSW and women in this figure. See section A2.2 in the Appendix for SSuN methods.


ACRONYMS: MSM = Gay, bisexual, and other men who have sex with men (collectively referred to as MSM); MSW = Men who have sex with women only.
Chlamydia — Rates of Reported Cases by Sex, United States, 2000–2017

NOTE: Data collection for chlamydia began in 1984 and chlamydia was made nationally notifiable in 1995; however, chlamydia was not reportable in all 50 states and the District of Columbia until 2000. Refer to the National Notifiable Disease Surveillance System (NNDSS) website for more information: https://wwwn.cdc.gov/nndss/conditions/chlamydia-trachomatis-infection/.
Contributing Factors

- Patient information gaps
- Lack of testing
- Men who seek partners online

Contributing Factors

• Changing perceptions of HIV infection

• Introduction of PrEP

Contributing Factors

• Not emphasized during medical training
  • 37.6% of medical students think they are adequately trained to address patients' sexual concerns

• 44% of U.S. med schools lack sexual health curricula

• Medical student discomfort when taking sexual history
  • Young
  • Older adults (>75 yrs)

STI Proctitis

- Multiple outbreaks reported in Europe and United States
  - Increased incidence likely parallels broader increase in STI incidence
- MSM are disproportionately affected
  - 23% MSM had rectal gonorrhea by NAAT
- Variable endoscopic or histologic features limited to sigmoid/rectum
  - Propensity to be misdiagnosed as IBD is documented
  - May mimic neoplasia in a subset of cases
  - Sexual history should be obtained routinely
- Proctitis may promote HIV transmission

Syphilis Proctitis

- Primary anorectal syphilis occurs 2-3 weeks after exposure
  - Anorectal chancre, often painful
  - May be mistaken for anal fissures

- Secondary syphilis occurs 6-8 weeks after chancre heal
  - Maculopapular rash of palms and soles
  - Systemic symptoms of fever, weight loss, night sweats
  - Condyloma latum
Syphilis Proctitis: Endoscopic Appearance

Syphilis gastritis
Syphilis: Diagnosis

- Ancillary stains low yield
- Darkfield examination for *Treponema pallidum* of exudate or tissue from lesions
- Two types of serologic tests
  1. Non-treponemal tests (VDRL or RPR)
  2. Treponemal tests
     - Fluorescent treponemal antibody absorbed [FTA-ABS] tests
     - *T. pallidum* passive particle agglutination [TP-PA] assay
     - Enzyme immunoassays and chemiluminescence immunoassays

Gonorrhea Proctitis: Clinical Presentation

- Typically encountered in individuals engaging in anal receptive intercourse
  - Results from contiguous spread from cervix in 50% of women
- 4.5% to 6% incidence in screened MSM
- 85% of infected patients are asymptomatic
  - Symptomatic patients have higher bacterial loads
- 25% co-infected with Chlamydia
- Perianal pain and pruritus, tenesmus, and mucopurulent or sanguinous discharge

Gonorrhea Proctitis: Endoscopic Appearance

Case courtesy of Dr. Aatur Singhi, UPMC
Chlamydia trachomatis

- Most common STI in United States
- LGV associated with serovars L1-L3
  - Incubation period 5-14 days
  - Serovar L2 associated with proctitis
  - Non-LGV chlamydial infections are epithelial, whereas LGV serovars are invasive and lymphotropic
Chlamydia Proctitis: Clinical Presentation

- **Non LGV chlamydia**
  - Majority of infections are asymptomatic
  - Anorectal pain, tenesmus, mucosanguinous discharge, abdominal pain, constipation

- **LGV: Proctitis and proctocolitis are now the most commonly reported clinical manifestations**¹
  - Stage 1: Painless, ulcerating papule
  - Stage 2: Painful inguinal/femoral lymphadenopathy
    - Proctitis occurs in 96% of patients²
  - Stage 3: Strictures, fistulas, disfiguring anogenital lesions

Chlamydia Proctitis: Endoscopic Appearance

Chlamydia

Young patient, 9 cm rectal mass

Courtesy of Dr. Christina Arnold, Ohio State University
Chlamydia/Gonorrhea Diagnosis

- No ancillary stains commercially available (yet)
- Rectal swab for NAAT
- Treat empirically when proctitis, lymphadenopathy, anogenital ulcerations are seen
Histologic Patterns
Normal Rectum

Normal Right Colon
3 Main Findings: Rectum

INFLAMMATORY LAMINA PROPRIA EXPANSION
MILD TO MODERATE, FOCAL ACUTE INFLAMMATION
PRESERVED GLANDULAR ARCHITECTURE
Case courtesy of Dr. Maryam Kherad-Pezhouh, Northwestern, Chicago, IL

Syphilis-Lymphoma-like

Rectal Prolapse-Like
Tumoral Form: Submucosal Fibrosis
Initial histologic impressions:
• Lymphoma
• EBV gastritis
Gonorrhea-ischemic/radiation injury pattern
Summary

- STIs are making a comeback
- MSM are at increased risk
- Clinical and pathologic features variable
  - Clinic: Thorough sexual history
  - Clinic and microscope: High level of suspicion
S/He who knows syphilis knows medicine

~ William Osler