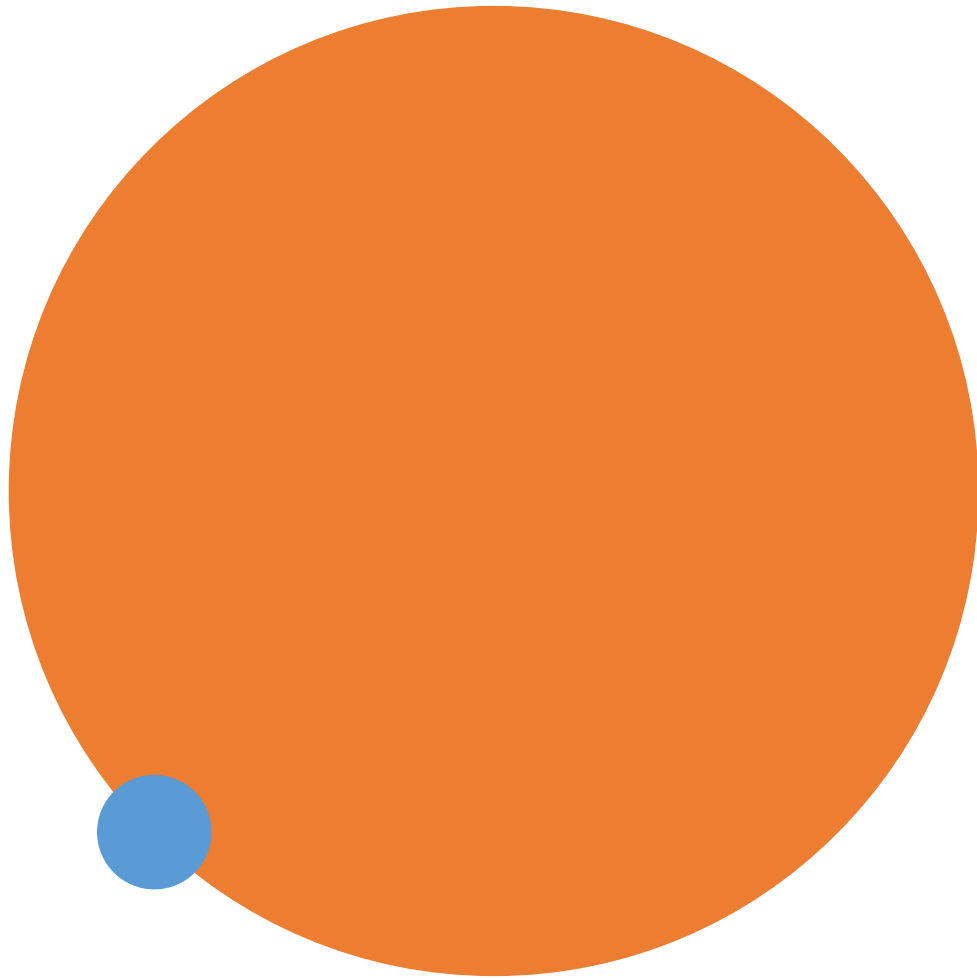




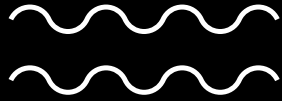
SASKATOON
**SEXUAL
HEALTH**

Inside a syphilis outbreak: some lessons learned so far

Lauren Tastad, MN, NP

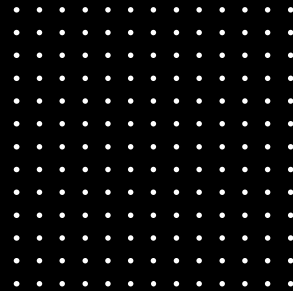


- Background and clinical setting
- Sexual health history taking and routine STI testing
- Common presentations
- Testing
- Treatment
- Follow up
- Cases



SASKATOON
**SEXUAL
HEALTH**

My clinical
setting:




Non-profit organization promoting sexual and reproductive health through education, advocacy and clinical services

STBBI testing and treatment; PrEP for HIV; contraception (IUDs and implants), Paps, medical abortion

Youth and other people who may be marginalized within the healthcare system (gender or sexual identity)

Over the past 5 years, large increase in syphilis cases amongst MSM and heterosexual population

Sexual health history

- Consent
 - Any symptoms or concerns? Has a partner tested positive?
 - When was their last STI test? Ever positive for an STI?
 - Have you been sexually active in the past 6 months? How many partners?
 - Monogamous relationship?
 - What gender are your partners?
 - What kind of sex? Vaginal, oral, anal; receptive/insertive (top/bottom); with condoms/barriers?
 - Other risk factors: snorting or injecting drugs, unprofessional tattoos
 - Vaccines (hepatitis, HPV)
 - Immigration history
- 



Routine testing: Test for one, test for all

**Chlamydia and gonorrhea: urine,
throat, rectal samples**

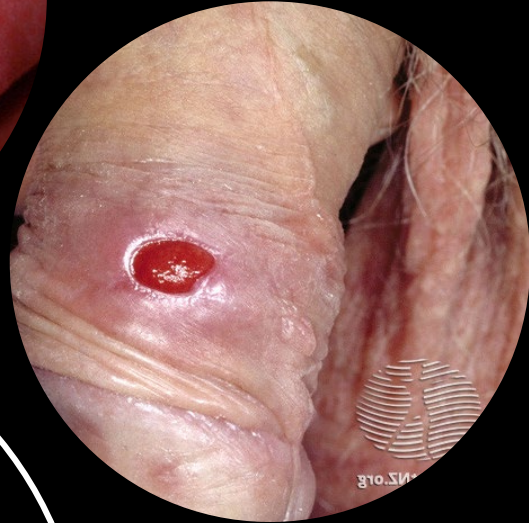
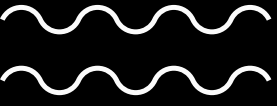
Syphilis and HIV

Hepatitis A, B, C depending on risk
factors, immunization and
immigration history

Thinking syphilis



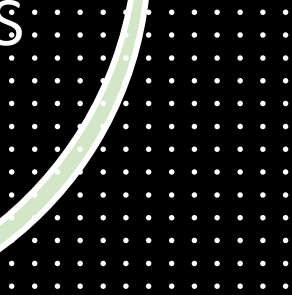
rmNetNZ.org



- Primary syphilis:
- Most common presentation is no symptoms
- Chancres: genital, peri-anal, oral
- typical and atypical:
 - Painful
 - Multiple

- Photos: dermnetnz.org

Common
presentations

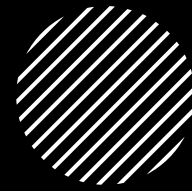


Diagnostic pitfall #1: telehealth

- Phone consult: 34 yo female with “painful lump” to right labia, she thinks it is a “cyst”
- Started as painless bump or “pimple,” becoming larger and painful over past 2 weeks
- Saw MD who prescribed valacyclovir x 3/7 – no relief
 - Sero-positive for HSV-1&2; lesion swab negative for HSV; no CT/GC test, no syphilis/HIV serology
- Some relief with warm compress, ibuprofen
- Bartholin’s abscess?
 - Rx Metronidazole, in-person f/u

Diagnostic pitfall #1: telehealth

- No improvement with metronidazole
- Exam: 1 cm single round ulcer, punched out border, right labia majora
- Treatment: bicillin (primary syphilis)
- Syphilis reactive, RPR 1:4
- Syphilis PCR positive



Common presentations

- Secondary syphilis:
 - Maculopapular rash
 - Mucocutaneous lesions: extensive, erosive/ulcerative lesions
 - Any strange rash or genital skin lesions!
 - Lymphadenopathy



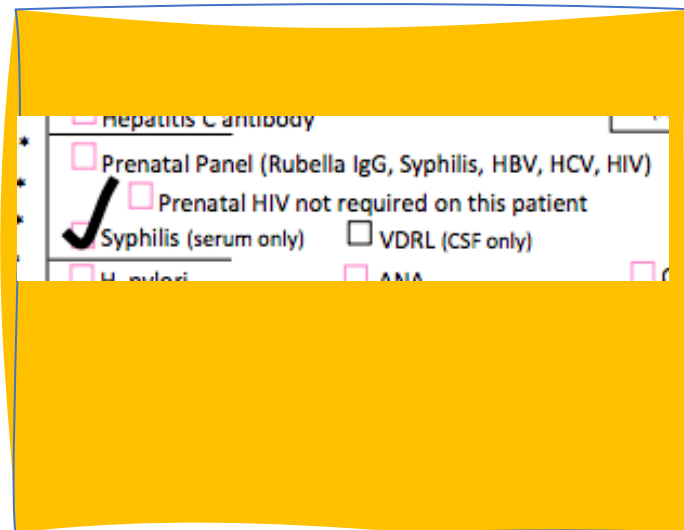
Diagnostic pitfall #2: ambiguous clinical manifestations

- 32 yo man – MSM
- Diagnosed with primary syphilis December 2020, treated with bicillin
 - RPR 1:2 (treatment day) → 1:1 (1 month f/u) → non-reactive in February, April 6, April 10th
- New penile lesions starting early April 2021
 - Started as small red bumps under foreskin, itchy and “burning,” progressing to areas of skin erosion
 - “Totally different” from chancre
 - Self-diagnosed with candida balanitis, treating with clotrimazole cream which is helping
 - Small possibility of re-exposure to syphilis about 4 weeks ago; eager to avoid bicillin

Diagnostic pitfall #2: ambiguous clinical manifestations

- Exam: erythematous papules and patches with few shallow ulcers/erosions over glans
- Plan: continue clotrimazole cream, rpt syphilis test in 2-4 weeks
- 2 weeks later: balanitis-like symptoms much improved; new painless, non-tender, mobile nodule (2-3 mm) shaft of penis
- Repeat syphilis test: RPR 1:16
 - Treated with bicillin x 1 dose – secondary syphilis

TESTING



Results

| Test Name | Result | Reference Ranges |
|---|--------------------------|------------------|
| Syphilis Screen | Reactive | |
| Rapid Plasma Reagin | Non-reactive | |
| Treponema Pallidum Particle Agglutination | Repeat Reactive | |
| Syphilis Interpretation or Action | See interpretation below | |
| Most likely interpretations include: | | |
| - biological false positive | | |
| - early primary syphilis | | |
| - late latent syphilis | | |
| - treated syphilis | | |
| - person from a country endemic for yaws, pinta or bejel. | | |
| Recommended Action: If risk factors for syphilis or signs/symptoms are consistent with early syphilis, discuss with MHO or do a one time repeat test in 4 - 6 weeks for a change in RPR titre. | | |

Results

| Test Name | Result | Reference Ranges |
|---|-----------------------------|------------------|
| Syphilis Form | | |
| Associated File | See attached | |
| Syphilis Screen | Reactive | |
| Rapid Plasma Reagin | Reactive, titer 1:32 | |
| Treponema Pallidum Particle Agglutination | Repeat Reactive | |
| Syphilis Interpretation or Action | See interpretation below | |
| Interpretation: Consistent with active infectious syphilis. | | |
| Recommended Action: Consult with MHO for possible treatment. Repeat serology in 4 weeks to follow RPR titre. | | |

Swabbing for syphilis?



| | | |
|---|---|---|
| Viral Exanthemata <input type="checkbox"/> Mumps <input type="checkbox"/> Urine (50 ml min) <input type="checkbox"/> Buccal Swab <input type="checkbox"/> Measles <input type="checkbox"/> Nasopharynx <input type="checkbox"/> Throat <input type="checkbox"/> Herpes simplex/Varicella Zoster <input checked="" type="checkbox"/> Swab for Lesion Screen (Use UTM) Specimen <u>penis</u> Urine <input type="checkbox"/> CMV (Cytomegalovirus) (Minimum volume 50 ml) <input type="checkbox"/> Legionella Antigen Detection | <input type="checkbox"/> Ova & Parasite Exam (stool in SAF) Relevant History Required, check all that apply <input type="checkbox"/> Travel/immigration <input type="checkbox"/> Age <13 years Country _____ <input type="checkbox"/> Symptoms >2 weeks Dates _____ <input type="checkbox"/> Immunosuppressed <input type="checkbox"/> Unsafe food/water <input type="checkbox"/> Suspected helminth other than <i>Enterobius vermicularis</i> <input type="checkbox"/> Prior parasite: _____ <input type="checkbox"/> Eosinophilia <input type="checkbox"/> Case contact <input type="checkbox"/> Other _____ | Comments: _____ Oxidase: _____ Catalase: _____ Haemolysis: _____ Resistance confirmation (ESBL, CRE etc.): _____ Comments: _____ Other/Special requests PCR Swab for Syphilis - send to N.M.H. |
|---|---|---|

Doc. 1400-55 RRPL001R V8 Microbiology Requisition RRPL-TestViewer.eHealthSask.ca Effective Date: November 5, 2018

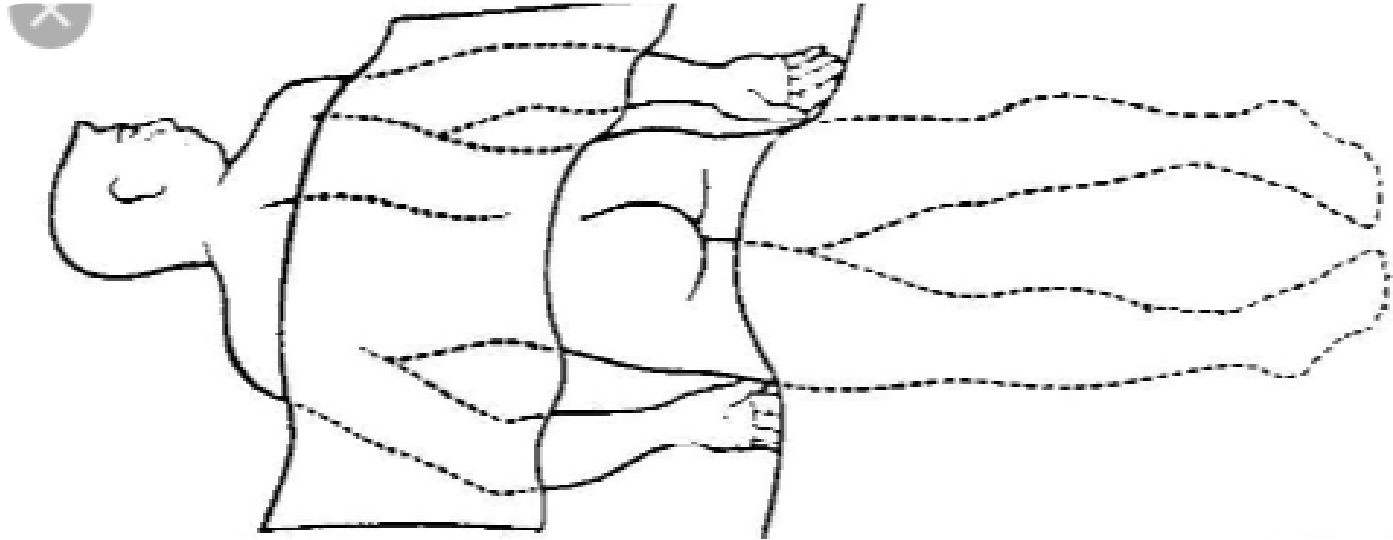
Treatment decisions

- History of **penicillin allergy**?
 - What was the reaction?
- Are they **pregnant**?
 - No unnecessary delays in treatment; can generally treat as outpatient if there is no penicillin allergy
 - Contact ID, OBS to plan for treatment & monitoring
 - 1, 2 or 3 doses? Penicillin desensitization?
 - Possibility of fetal distress, preterm labour with **Jarisch-Herxheimer reaction** (rare); seek urgent care for fever, decreased fetal movement, regular contractions
 - <https://www.gov.mb.ca/health/publichealth/cdc/protocol/syphilis.pdf>
 - Ultrasound for signs of fetal syphilis > 20 weeks
- Any signs/symptoms of **neurosyphilis**, ocular/otic involvement?
 - Headaches, vertigo, tinnitus, hearing loss, conjunctivitis, eye pain, visual disturbance

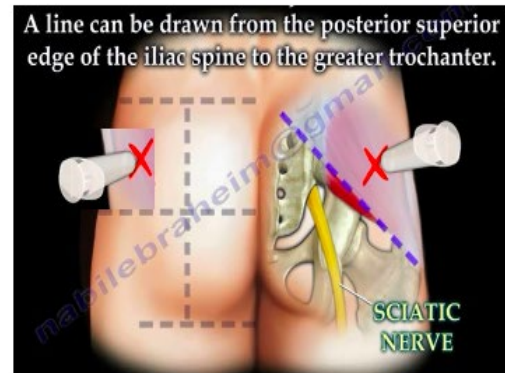
Treatment decisions

- **Should you treat a contact to a case (without test results)?**
 - Sexually active with someone who has confirmed infectious syphilis currently/within past **30 days**
 - If they have symptoms
 - If they might not come back for follow-up
- **When to wait for test results?**
 - If the contact was more than 30-90 days ago
 - Patient is asymptomatic and can be contacted for follow up
- *Saskatchewan Communicable Disease Control Manual, Section 5*

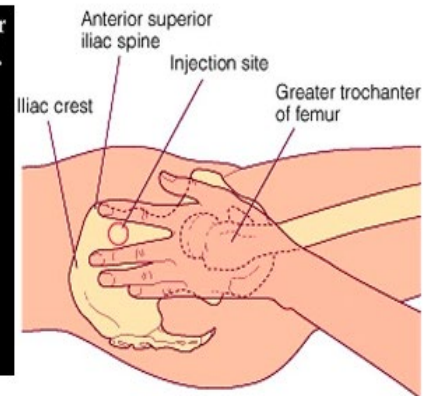
Administering bicillin



Dorsogluteal Site



Ventrogluteal Site



Treatment day to-dos

- **Treatment day serology!** (repeat syphilis serology on day of treatment, even if initial screen was 1 week prior)
- **Pregnancy test:** urine or serum bhCG
- Plan for **f/u serology:** requisitions for serology at 1, 3, 6 and 12 months after treatment (infectious syphilis)
- Fill out **notification form** for PPH
 - Symptom information
 - Staging and treatment
 - Contact tracing – go back 1 year

Post-serology

- **Infectious syphilis**
(primary, secondary, early latent):
 - 1, 3, 6 and 12 months (and 24 months if HIV+)

- **Late latent syphilis:**
 - 12 and 24 months

Diagnostic pitfall #3: inadequate post-serology

- 29 yo male, MSM, IVDU, wanting to start PrEP for HIV
- Asymptomatic for STI/HIV; last STI test about 6 months ago: urine only, in another province. Pos GC, treated.
- History of syphilis infection – treated with doxycycline in 2018
 - RPR 1:32 at diagnosis (May 2018); RPR 1:32 on treatment start-day (June 2018); RPR 1:8 with 1-month serology (August 2018); no subsequent testing
- Syphilis serology Jan 13/21: reactive, RPR 1:16

Diagnostic pitfall #3: inadequate post-serology

- Asymptomatic but did recall “painless open sore” that spontaneously resolved 1 or 2 months ago
- ? Reinfection, early latent syphilis. Treated with doxycycline 100 mg bid x 14/7
 - Completed 10 of 14 days – lost medication
- 1 month serology: RPR 1:16
- Consult ID: possible inadequate treatment of initial infection → late latent syphilis
- Penicillin allergy? Rash in infancy
- Treated with bicillin x 3 weekly doses
- RPR 1:8 → 1:4

Resources

- Local CDC: PHN, nurse clinician, MHO
- ID, other specialist support – ACAL/system flow
- PHAC STI Guidelines: <https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/sexually-transmitted-infections.html>
- Saskatchewan Communicable Disease Control Manual (Section 5: Sexually Transmitted Infections):
<https://www.ehealthsask.ca/services/Manuals/Pages/CDCManual.aspx>
- Infectious syphilis management tool (Manitoba):
https://www.gov.mb.ca/health/publichealth/factsheets/syph_mgmt_tool.pdf
- <https://sexlifesask.ca/> (Resources for patients and health care providers)
- <https://skhiv.ca/pre-exposure-prophylaxis-prep/>





Questions?
