Advances in Sexual Health

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Advances in STI

- Testing
- Treatment
- Prevention

Lancet Infectious Diseases Commission Lancet Infect Dis 2017; 17: e235–79
Current shortfalls

- Access to testing
  - Higher pressure on clinic, those with symptoms wait longer*
  - Online testing – patchy implementation, reaching enough people?

- Suboptimal diagnostics
  - Narrow repertoire of tests – poor coverage of TV and MG NAATs
  - Slow time to results

- Still managing STI syndromes rather than infections
  - Overuse of antibiotics

- Antimicrobial resistance

* Foley et al Sex Transm Infect 2017 Nov;93(7):472-475
Mycoplasma genitalium: global macrolide resistance

With permission Katie Ovens

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Macrolide resistance testing in *M. genitalium*

- Simultaneous detection of MG and mutations in the 23sRNA gene A2058G, A2058T, A2059G, A2059T
- Proportion of treatment failures can be reduced from 40% to around 3% (Bradshaw - unpublished work)

- Quinolone resistance assay in development
Implemented a Gyr A genotypic assay

Text reminders that cipro could be used

Increased use of cipro from:
- Period 1 0%
- Period 2 12.5% (3/24)
- Period 3 81.8% (9/11)
Rapid diagnostics

Cepheid
90 minutes

Atlas Genetics io
30 minutes

TwistDx
15 minutes
Test and wait

• Do all partners need treating?

• *N. gonorrhoeae* guidelines 2018 - if contact was >2 weeks ago, test and wait for results

• Needs to be weighed up against the risk of re-infection

• Decision should be based on a clinical risk assessment and in partnership with the patient.

• *M. genitalium* guidelines 2018 – test current partner only
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Future possibilities for treatment of GC

• Use less ceftriaxone, use other sensitive agents

• New drugs
  • Solithromycin – Phase 3 SOLITAIRE-U non-inferior to cef/azith
  • Zoliflodacin, Gepotidacin
  • Recycling of older antibiotics – spectinomycin, gentamicin, fosfomycin

Poor activity against non-genital gonorrhoea
Kissing kids to blame for gonorrhoea spike, 'evidence out of Melbourne' suggests

1. Gonorrhoea in saliva – implications for transmission without direct inoculation of pharynx

2. Saliva used as lubricant for anal receptive practices

3. RCT - Listerine against pharyngeal GC
   - Gargled Listerine or saline for 1 min
   - Less likely to be culture positive on after listerine (p=0.013)
   - Look out for OMEGA study – daily mouthwash

Chow EPF et al Sex Transm Infect 2016;0:1–6.
Chow EPF et al Sex Transm Infect 2016;92:347–349
Dequalinium intravaginal tablet for treatment of bacterial vaginosis

• 6 days pv tablet compared with clindamycin
• Cure rate 81.5% cf 78.4% clindamycin
• Non-inferiority demonstrated
• Only short term follow up

• Well tolerated
• Cost – slightly more than metronidazole
• No interactions
• 2018 - NIHR have commissioned a BV study with dequalinium
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Vaccines – MeNZB (Bexsero)

- No GC vaccines so far. *N. meningitidis* and *N. gonorrhoea* are similar
- Mass vaccination programme of <20 year olds in NZ
- Retrospective case control study of young people attending GUM clinics
- Those vaccinated significantly less likely to have GC
- Vaccine effectiveness 31%

PEP with doxycycline 200mg <24hours for MSM taking PrEP

232 MSM

Overall reduction in incident STIs 47%

70% decrease in CT diagnoses, 73% decrease in syphilis diagnoses

Molina JM et al Lancet Infect Dis
2018 Mar;18(3):308-317

Position Statement on Doxycycline as Post-Exposure Prophylaxis for Sexually Transmitted Infections
EXPRESS DELIVERY: TENVIR-EM (U.K. & N-IRELAND)
$72.00 – $140.00

Kamagra 100 (U.K. & N-IRELAND)
$26.00 – $88.00

Doxycycline (U.K. & N-IRELAND)
$33.00 – $67.00
Doxycycline PEP - more evidence needed

• Larger clinical trials – how long before resistance detected?

  ClinicalTrials.gov Identifier: NCT02864550
  Official Title: A Randomized, Placebo-controlled Trial of Oral Doxycycline for the Prevention of Syphilis in Men Who Have Sex With Men (MSM)

• Observational data from clinics
  • “Have you taken any antibiotics since your last visit?”
  • How are they taking it? Daily? Event based?
  • Tolerability
  • Incident infections

• UK sales data from Dynamix
Summary

• Decoupling of incident HIV and bacterial STI

• Syndromic management is still routine for certain STI presentations

• Faster and more novel tests in pipeline

• Threat of AMR – two almost untreatable STI
Top tips

1. Use less antibiotics (test and wait)

2. Use the right antibiotic (reflex resistance testing, known antimicrobial sensitivities)

3. In future consider using a non-antibiotic

4. Find out if your patients are taking doxycycline