Getting it right: TREATMENT FAILURE, RE-INFECTION OR RESISTANCE?

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Case presentation: Ms KH, 49 y/o, F

10\textsuperscript{th} March 2018

Presented with:

- **Abnormal discharge**: thin, odorous, lots of it, sometimes yellow / green
- occasional **vulval itch**
- **Lower abdominal sharp pain**
- **Sharp pain passing urine** few days ago, now improved

**Denies sex since last seen** (last sex 4 months ago - casual male partner – no condoms)
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Last seen: 15th Feb 2018 – presented with abnormal discharge:

- Chlamydia, gonorrhoea, HIV and syphilis negative
- Herpes Simplex Type 2 detected (small vulval sore)
- Bacterial Vaginosis seen on microscopy – Rx 2g Metronidazole STAT

Discharge improved for approx. 1 week but then recurred

Contraception: Combined Pill (Microgynon)

Smear: HPV high grade; negative cytology (due 12 month repeat)

PMH nil; DH nil; NKDA
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Examination:
- Mild vulvitis
- Copious thin frothy discharge
- Cervix unremarkable
- Bimanual exam unremarkable

Near Patient tests:
- Urine dip NAD
- Pregnancy test negative

Microscopy:

Diagnosis: Trichomonas Vaginalis & Bacterial Vaginosis
Trichomonas Vaginalis: What to tell Ms KH?

**What is it?**
- A sexually transmitted infection (flagellated protozoon) – provide PIL

**What are the symptoms?**
- Her symptoms are typical: abnormal discharge (classically frothy yellow) vulval itching & vaginitis, dysuria, lower abdo discomfort
- Also: may see strawberry cervix (2%), may be asymptomatic (10-50%)

**What is the recommended treatment?**
- Metronidazole 2g orally STAT or
- Metronidazole 400-500mg twice daily for 5-7 days

**General advice:**
- screen for other STIs & advise condoms
- treat sexual partners (current & within 4 weeks)
- abstain from sex for at least 1 week following patient & partner treatment

Treatment given: Metronidazole 400mg BD 7 days
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Job done – well done!! 😊
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28th Aug 2018:
- Presents with abdominal pain (constant dull pain with period like cramps for 2 days)
- No other associated symptoms
- Has since seen GP and treated for BV with Metronidazole 400mg BD 7 day

Denies sex since last seen (last sex 9 months ago)
Exam: mild periumbilical tenderness, abdo soft, BME unremarkable
  minimal mildly offensive discharge
Urine dip & PT: neg

**Microscopy: TV & BV seen** (Chlamydia & gonorrhoea NAAT negative)
Persistent or recurrent TV

Action:

➢ Check compliance: Treatment taken as directed & tolerated
➢ Check risk re-infection: Ms KH denies any sex since prior to first seen in Feb
➢ ?? Consider resistance: But access to testing lacking in UK

What treatment regime next??

1. Repeat course of 7-day standard therapy: Metronidazole 400-500mg twice daily for 7 days
2. Higher dose course of nitroimidazole: Metronidazole or tinidazole 2g daily for 5-7 days or Metronidazole 800mg three times daily for 7 days

Treatment given: Metronidazole 2g daily for 7 days
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11th Sept 2018

➢ unable to tolerate Metronidazole 2g daily (tolerated 3 days then took 400mg BD for 7 days)
➢ symptoms resolved, no sex since last seen
➢ microscopy: TV NOT seen (Chlamydia & gonorrhoea NAAT negative)

26th Sept 2018

➢ TV DETECTED on HVS MCS via GP
➢ GP treats with Metronidazole 400mg BD (PC abdo pain - issued as part of Rx for suspected PID)
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4th Oct 2018:

- Unable to tolerate Metronidazole 400mg BD
- Nausea, itchy rash to legs, metallic taste, concentration poor - improved on stopping

What next..?
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If this were treatment failure...

- Resistance testing should be performed if available
- Very high-dose course of tinidazole
  - Tinidazole 1 g BD / TDS, or 2 g BD for 14 days +/- intravaginal tinidazole 500 mg BD for 14 days
- Other treatments eg Paromomycin / Furazolidone / Acetarsol / 6% Nonoxynol-9 PV
  - Limited evidence, some reported success
  - May be difficult to source

But in the case of intolerance to higher dose course of metronidazole...

- There may be cross-reactivity between metronidazole & tinidazole
- But no effective alternative...

What would you do?

Treatment given: Tinidazole 1g twice daily for 14 days
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11th Dec 2018

- Completed full 14 days Tinidazole 1g BD
- No vulvo-vaginal symptoms
- Denies sex / sexual contact since first seen
- Microscopy: TV NOT seen

Patient requested provider partner notification for last sexual contact approx. 1 yr ago
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Partner attends following Health Advisor initiated partner notification

➤ Sexual history: infrequent but ongoing condom-less sex with index ‘girlfriend’ for 12 months
➤ STI screen
➤ Treated as contact TV

**Treatment given: Metronidazole 400mg BD 7 days**

No further attendances from Ms KH
Learning points

➢ Did we miss TV on initial presentation?
  ➢ Microscopy – sensitivity 45–60% in women, read within 10 min
  ➢ Access to NAAT (higher sensitivity 88%–97%) – should be the test of choice where resources allow

➢ Exclude re-infection as a cause
  ➢ First-line treatments are cheap and easy
  ➢ Additional costs & resources for management of persistence / recurrence/ resistance / allergy
  ➢ What would have made a difference in this case?

➢ Management of TV as per BASHH guidelines
  ➢ Limited & costly if first / second line options aren’t effective or appropriate
  ➢ Consider patient factors: compliance, tolerance of nitroimidazole, accurate history
References


Image: https://doctorlib.info/medical/clinical-practice-emergency-medicine/133.html