STI Diagnosis and Management in Primary Care

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Learning Objectives

• To identify typical presentations of STIs in general practice-case scenarios
• To clarify which diagnostic tests are most useful
• To discuss in which situations a referral to the sexual health clinic might have additional benefit for the patient
• To highlight the new BASHH guidelines for the treatment of gonorrhoea and explain why they are important in primary care.
• To offer sources of advice and support, for testing and management of STIs locally
Joint RCGP /BASHH guidelines
STIs in primary care March 2013

• Available at
• www.rcgp.org
    ➢ Clinical tab
    ➢ Clinical Resources
    ➢ Topics S
    ➢ STIs in Primary Care
• www.bashh.org/guidelines
    ➢ Other clinical guidelines endorsed by BASHH (at the bottom of the page)
Common Clinical Presentations

- Male patient with discharge / dysuria / testicular pain
- Female patient with vaginal discharge
- Female patient with suspected PID
- Other presentations which may be STI related
- Patient with genital ulcer
- Male patient with rectal symptoms / symptoms prostatitis
What tests do you have available?

Charcoal MC and S / culture and air dried slide (micro)

Chlamydia and Gonorrhoea NAATs (virology)
What tests do you have available?

- HSV PCR swab
- Serological Tests for HIV and Syphilis
Men

Urethritis and epididymo-orchitis
Case 1

• A 23-year-old male attends with 2 weeks of discomfort passing urine with an intermittent slight clear urethral discharge. He has a regular female asymptomatic partner of 5 months, they initially used condoms but not for the past month. They last had sex, vaginal only, 14 days ago.
Differential diagnoses

• Dysuria
  – UTI
  – Gonorrhoea
  – Chlamydia
  – NGU/NSU
  – Balanitis
    • HSV
    • Candida
    • Non specific

• Discharge
  Gonorrhoea
  Chlamydia
  NGU/NSU
  Candida
  Physiological
Causes of urethritis

- Chlamydia – common
- Gonorrhoea – less common, but remember more prevalent in BME groups, urban areas and MSM
- NSU “Non Specific Urethritis” – usually infective (other organisms e.g. Mycoplasma genitalium, TV, HSV, Yeasts, adenoviruses) but there may be no infective cause.
Male Urethritis

- Symptoms
- **Discharge** – usually indicates STI, may be minimal or copious, mucoid, purulent or mucopurulent.
- **Dysuria** – don’t assume that dysuria is due to an STI – a sexually active man must have an STI excluded
- **Urethral/penile discomfort / “itch”**
Differential diagnosis testicular pain

• Epididymo-orchitis
• Torsion
• Tumour
• Trauma
• Hydrocele
• Variocoele
• TB
• Mumps
Causes of Epididymo-orchitis

- Pain / swelling / inflammation of the epididymis +/- testicle
  - **Usually** - complication of urethritis due to an STI (esp if < 35 years old and sexually active)
  - **Sometimes** - complication of UTI (esp if >35 years old, recent instrumentation etc) – middle youth!
- Viral due to mumps (non vaccinated adults born between 1982-86)
- **Rarely** - strep, drugs e.g. amiodarone, TB
- Trauma, lymphoma
Male patient with dysuria, urethral discharge or testicular pain

primary care investigations

• First catch urine (after at least one hour) for chlamydia and gonorrhoea NAAT
  – Leucocyte esterase
  – Look for “threads” – strands of pus suspended in the first catch urine. Useful clue for inflammation anterior urethra and may suggest urethritis

• Mid stream Urinalysis / MSU to exclude UTI
Male patient with dysuria, urethral discharge or testicular pain

Why send them to Sexual Health Clinic?

• Urethral swab will be taken and direct microscopy performed.
• On the day, they will be told if they have
  – Urethritis (STI origin – partner needs treating)
  – gonorrhoea (which would need additional antibiotics)
• Partner notification will be done for you
Symptoms Urethritis or Epididymo-orchitis

- Primary Care
- Clinic
Male patient with dysuria, urethral discharge or testicular pain

empirical treatment in primary care

• Suspected urethritis can be treated with
  DOXYCYCLINE 100mg bd for 1/52 or
  AZITHROMYCIN 1g STAT

• Suspected epididymo-orchitis can be treated with
  DOXYCYCLINE 100mg bd 2/52 or
  OFLOXACIN 200mg bd for 2/52

• Gonorrhoea requires additional treatment

RCGP BASHH Joint guideline STIs in primary care 2013
Good practice point

• How likely is gonorrhoea?
• Suggestive history
  – Contact of GC
  – Inner city, Afro-caribbean
  – MSM (how well do you know your patient?)

  – Can the patient be persuaded to attend the GUM clinic?
Male patient with dysuria, urethral discharge or testicular pain

**Further Management**

- Partner should be tested AND treated
- No SI until patient and partner both treated (one week after a STAT dose)
- Screen for other STIs
- Arrange to follow up patients with epididymo-orchitis, once you have results.
Remember....

• As above BUT
• if in doubt about torsion refer urgently to urology
• Dependent on diagnosis consider US
Women
Vaginal Discharge and Suspected Pelvic inflammatory disease
Things to consider

- Reasons for presentation and concerns
- Characteristics of the discharge
- Any associated symptoms including upper genital tract
- Risk of STIs - age, new sexual partner, number in past 3/12
- Contraceptive use, pregnancy, post-partum, post-abortion
- Concurrent medications, previous treatments used
- Medical conditions (e.g. diabetes, immuno-compromised state)
- Non-infective causes of discharge (foreign body, cervical ectopy, polyps, genital tract malignancy, dermatological disease)
Vaginal Discharge Causes

- Infective
  - BV
  - Candida
- Non Infective
  - Physiological (exclusion)
  - Others e.g. cervical ectopy, foreign body, polyp

STI causes
- Chlamydia (common)
- Gonorrhoea (less common)
- Trichomonas vaginalis (less common)
- Mycoplasma genitalium

Bacterial STIs such as GC and Protozoan -TV are linked to urban and certain BME populations and high rates exist in the Afro-Caribbean population in Bristol.
## Symptoms and Clinical Presentation
### Vaginal Discharge Diagnostic Clues

<table>
<thead>
<tr>
<th>BV</th>
<th>Candida</th>
<th>TV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Discharge</strong></td>
<td>Thin and watery Homogeneous</td>
<td>Often thick lumpy and white, but variable</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>Malodour</td>
<td>No malodour</td>
</tr>
<tr>
<td><strong>Associated symptoms</strong></td>
<td>None</td>
<td>Itch / soreness External dysuria External dyspareunia</td>
</tr>
<tr>
<td><strong>Typical signs</strong></td>
<td>Discharge coats the vagina and the vestibule</td>
<td>Vaginal inflammation Fissures Oedema</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>&gt; 4.5</td>
<td>≤ 4.5</td>
</tr>
</tbody>
</table>
Self taken swabs for gonorrhoea perform well
High Vaginal Swabs – limitations of use

- Lab will report simply what is cultured and reporting of commensals may lead to overtreatment (and undue anxiety)
- Diagnostic yield is poor except for finding candida which produces characteristic symptoms (without which you wouldn’t treat anyway)
- Labs differ in what organisms they report
Female patient with Vaginal discharge
Why send them to the sexual health clinic?

- Clinician taken high vaginal swabs will be used for direct microscopy
- On the day they will be told if they have
  - Bacterial vaginosis
  - Candida
  - Trichomonas Vaginalis
- Trichomonas culture probably less sensitive from a charcoal swab in primary care than from direct culture at the clinic.
- Partner notification will be done for you.
Vaginal Discharge

• Indications for referring to GUM:
  – Trichomonas infection suspected
  – Failure to respond to treatment
  – Diagnostic uncertainty
Vaginal Discharge

- Primary Care
- Clinic
Management of causes of discharge

**Candida**
- Fluconazole 150 mg oral stat
- or
- Clotrimazole 500mg pess PV stat

**Bacterial vaginosis**
- Metronidazole 400mg bd for 5 days
- Conflicting evidence for acidifying gels and lactobacilli preparations

**Trichomonas Vaginalis**
- Metronidazole 400mg bd for 5 days
- Treat partner
Pelvic Inflammatory Disease

Causes

- STIs e.g. chlamydia, gonorrhoea
- Other bacteria e.g. Mycoplasma genitalium (no test) or mixed aerobes and anaerobes
- Non STI causes e.g. post procedural, post partum

⚠️ The absence of STIs does not exclude diagnosis of PID
Pelvis Inflammatory Disease
Symptoms and Clinical Presentation

- Lower abdominal pain and dyspareunia
- May be associated with dysuria, IMB, PCB and discharge

<table>
<thead>
<tr>
<th>Differential diagnoses</th>
<th>Should be excluded in all women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ectopic pregnancy</td>
<td>Should be excluded in all women</td>
</tr>
<tr>
<td>Acute appendicitis</td>
<td>Nausea and vomiting more common</td>
</tr>
<tr>
<td>Endometriosis</td>
<td>Symptoms related to cycle</td>
</tr>
<tr>
<td>UTI</td>
<td>Urinary symptoms</td>
</tr>
<tr>
<td>IBS</td>
<td>See NICE diagnostic criteria <a href="http://www.nice.org.uk">www.nice.org.uk</a></td>
</tr>
</tbody>
</table>
Female patient with Pelvic Pain
primary care investigations

- Endocervical or vulvo-vaginal swab for chlamydia and gonorrhoea NAATs (urine NAATs sub-optimal)
- Endocervical culture for gonorrhoea “if likely”
- Other tests pregnancy test, urine dip, CRP
- Temperature, Pulse, BP

RCGP BASHH Joint guideline STIs in primary care 2013
Female patient with Pelvic Pain

empirical treatment in primary care

- Ceftriaxone 500mg im plus
- Doxycycline 100mg bd for 2/52 plus
- Metronidazole 400mg bd for 2/52
- or
- Ofloxacin 400mg bd for 2/52 plus
- Metronidazole 400mg bd for 2/52

Low threshold for prompt empirical treatment in view of risks of long term sequelae (e.g. infertility)

RCGP BASHH Joint guideline STIs in primary care 2013
Female Patient with suspected PID

**Further management**

- Partner should be treated
- No SI until patient and partner both treated
- Review patient in 3 days if severe and tell patient to seek medical advice should symptoms worsen. Arrange to follow up once you have results.
Female patient with suspected PID
Why send them to the sexual health clinic?

- Direct microscopy will look for pus on the cervix (good negative predictive value for PID)
- Direct microscopy will detect gonorrhoea and ensure appropriate treatment is given
- Trichomonas and gonorrhoea culture likely to be more reliable from the clinic due to transport issues
- Partner notification will be done for you
Pelvic Pain

• Primary Care

• Clinic
Management

• You recall the patient
• Take a full sexual history
• NAAT and culture from each exposed site
• Treat with
  – ceftriaxone 500mg IM single dose mixed with 2mls of 1% lidocaine and
  – azithromycin 1g single dose
• Abstain from sexual intercourse for 1 week and until regular partner treated
• Contact trace partners in past 3 months
• ToC from each site that initially tested positive at 2 weeks.
• Alternatively: Refer to GUM
Case 4

- A 27 year old lady attends your surgery for her cervical cytology 6months after her treatment for CIN2.
<table>
<thead>
<tr>
<th>AIDs defining</th>
<th>Other conditions where it should be offered</th>
</tr>
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<tbody>
<tr>
<td>Respiratory</td>
<td></td>
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<tr>
<td>TB</td>
<td>Bacterial pneumonia</td>
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<tr>
<td>PCP</td>
<td>Aspergillosis</td>
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<tr>
<td>Neurology</td>
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<tr>
<td>Toxoplasmosis</td>
<td>Aseptic meningitis</td>
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<tr>
<td>Cerebral lymphoma</td>
<td>Cerebral abscess</td>
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<tr>
<td>Cryptococcal meningitis</td>
<td>SOL of unknown cause</td>
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<tr>
<td>Progressive multifocal leucoencephalopathy</td>
<td>Guillain Barre Syndrome</td>
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<td></td>
<td>Transverse myelitis</td>
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<td></td>
<td>Peripheral neuropathy</td>
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<td></td>
<td>Dementia</td>
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<td></td>
<td>Leucoencephalopathy</td>
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<tr>
<td>AIDs defining</td>
<td>Other conditions where it should be offered</td>
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<tr>
<td>Dermatology</td>
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<tr>
<td>Kaposi sarcoma</td>
<td>Severe or recalcitrant seborrhoeic dermatitis</td>
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<td>Severe of recalcitrant psoriasis</td>
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<td></td>
<td>Multidermal or recurrent HZ</td>
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<tr>
<td>Gastroenterology</td>
<td></td>
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<tr>
<td>Persistent cryptosporidiosis</td>
<td>Oral candidiasis</td>
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<tr>
<td></td>
<td>OHL</td>
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<td></td>
<td>Chronic diarrhoea unknown cause</td>
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<td></td>
<td>Weight loss unknown cause</td>
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<tr>
<td></td>
<td>Salmonella, Shigella, Campylobacter</td>
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<td></td>
<td>Hepatitis B</td>
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<td>Hepatitis C</td>
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<tr>
<td></td>
<td>AIDs defining</td>
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<td>Oncology</td>
<td>NHL</td>
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<td>Gynaecology</td>
<td>Cervical cancer</td>
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<td>Ophthalmology</td>
<td>CMV retinitis</td>
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<td>AIDs defining</td>
<td>Other conditions where it should be offered</td>
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<td>--------------------------------------------</td>
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<tr>
<td>ENT</td>
<td>Lymphadenopathy of unknown cause</td>
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<td></td>
<td>Chronic parotitis</td>
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<td></td>
<td>Lymphoepithelial parotid cysts</td>
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<tr>
<td>Other</td>
<td>Mononucleosis like illness</td>
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<tr>
<td></td>
<td>PUO</td>
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<tr>
<td></td>
<td>Any lymphadenopathy</td>
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<tr>
<td></td>
<td>Any STI</td>
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</tbody>
</table>
Case 5

- A 22 year old man attends your surgery having had unprotected sex yesterday
# PEPSE

High Risk – MSM, immigrated from high prevalence

<table>
<thead>
<tr>
<th></th>
<th>HIV +ve, VL detectable</th>
<th>HIV +ve, VL undetect</th>
<th>Unknown, high risk</th>
<th>Unknown, low risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>R-AI</td>
<td>Recommend</td>
<td>Recommend</td>
<td>Recommend</td>
<td>Not</td>
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<tr>
<td>I-AI</td>
<td>Recommend</td>
<td>Not</td>
<td>Consider</td>
<td>Not</td>
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<tr>
<td>R-VI</td>
<td>Recommend</td>
<td>Not</td>
<td>Consider</td>
<td>Not</td>
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<tr>
<td>I-VI</td>
<td>Recommend</td>
<td>Not</td>
<td>Consider</td>
<td>Not</td>
</tr>
<tr>
<td>Fellatio with ejaculation</td>
<td>Consider</td>
<td>Not</td>
<td>Not</td>
<td>Not</td>
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<tr>
<td>Fellatio without</td>
<td>Not</td>
<td>Not</td>
<td>Not</td>
<td>Not</td>
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<tr>
<td>Splash to eye</td>
<td>Consider</td>
<td>Not</td>
<td>Not</td>
<td>Not</td>
</tr>
<tr>
<td>Cunnilingus</td>
<td>Not</td>
<td>Not</td>
<td>Not</td>
<td>Not</td>
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</tbody>
</table>

Consider = Sexual assault, symptoms/confirmed STI or source suspected to have acute HIV
PEPSE

- Within 72 hours, the earlier the better
- Raltegravir 1 tablet BD and
- Truvada 1 tablet OD
- Minimum 28 days
- Follow up at Southmead HIV services
Recommended or Considered
- Call Health Advisors 0117 3426944

Not recommended
- Opportunity for sexual health and prevention
- Encourage to attend
Genital ulceration
Case 6

• A 32-year-old man attends with a generalised rash, particularly effecting his palms and soles?
Information

• Sexual history
• Previous history of skin problems
• Tested or treated for syphilis before – if so details.
• Other symptoms
Other tests

- Urgent syphilis confirmation test
- HIV test
- Sexual health screen
- Refer
Diagnostic clues genital ulcers

More likely to be Herpes
• Multiple ulcers
• Painful
• Painful lymph nodes

More likely to be syphilis
• Single ulcer
• Painless
• Painless lymph nodes
Patient with a genital ulcer

Investigations and Treatment

- HSV PCR test
- Serology for syphilis (with repeat at 2/52 if indicated by history)
- Consider treatment ACICLOVIR 200mg 5 x day for 5 days
- No need to delay treatment with aciclovir if you don’t have access to a PCR swab.
Patient with a genital ulcer
Why send them to the sexual health clinic?

- Health advisers very good at herpes counselling
- If high risk history e.g. patient is a gay man,
  - on the day they may be told if
    - They have syphilis based on dark ground microscopy
    - They should be offered treatment for suspected syphilis based on their history
- Partner notification will be done for you and is very important in cases of syphilis
- May be an advantage to refer atypical ulcers for consideration of alternative diagnosis
Ulcer

- Primary care
- Clinic

Dark ground microscopy useful to exclude syphilis in high risk male
Male patient with proctitis

investigations in primary care not recommended

• High risk male patient with rectal discharge, bleeding or pain
• Refer to sexual health clinic
• If patients decline to attendance GUM, suggest discuss with senior clinic staff
• Recommended tests would include
  • proctoscopy,
  • direct microscopy to exclude gonorrhoea and NAATs / serology to exclude LGV.
Don’t forget to offer an HIV test

- In areas high prevalence >2 per 1000, test
  - all new patients
- In areas low prevalence <2 per 1000, test
  - Patients with clinical indicator disease
  - Anyone “at risk” (includes patients with an STI)

HIV in Primary Care Medfash 2011
Conclusions

- Think about the diagnostic tests you have available and when best to use them.
- Consider whether referral to the sexual health clinic will help the individual patient, depending on the history and the clinical findings.
- Consider the likelihood of gonorrhoea and whether treatment delivery is feasible in your practice.
- If the patient declines to attend the GUM clinic, take the tests yourself, treat empirically and follow up with the results.
- Advice and support are available
Sources of information

• BASHH guidelines (all STIs) www.bashh.org
• RCGP STI guideline www.rcgp.org
• Advice from medical staff at Bristol Sexual Health Centre 0117 342 6913
• Advice from HPA laboratory staff  0117 342 5551 (virology and microbiology)
• The next STIF course 01\(^{st}\) and 02\(^{nd}\) Feb 2016
  contact Shonda Powell
  shonda@spcorporateservices.com