

Royal College of General Practitioners

Sexually Transmitted Infections in Primary Care

RCGP Sex, Drugs and HIV Task Group
British Association for Sexual Health and HIV

1st Edition 2006



Written by:
Dr Neil Lazaro

Sexually Transmitted Infections in Primary Care

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1st Edition March 2006

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The BMJ Publishing Group, publishers of Sexually Transmitted Infections 1999; 75 suppl 1, which was referred to for the development of these guidelines and has been used with permission from the BMJ Publishing Group.

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Contents

1. Male urethral discharge	7
2. Abnormal vaginal discharge	10
3. Bacterial vaginosis	15
4. Vulvo-vaginal candidiasis	17
5. Trichomonas vaginalis	18
6. Epididymo-orchitis	19
7. Pelvic inflammatory disease	20
8. Chlamydia	21
9. Gonorrhoea	29
10. Herpes	31
11. Syphilis	35
12. Genital warts	38
13. Genital molluscum contagiosum	40
14. The ABC of hepatitis	41
15. Pubic lice	43
16. Genital scabies	44
17. Balanitis	45
18. Prostatitis	46
19. Sexually acquired reactive arthritis (SARA)	48
20. Sexual assault	51
21. Ophthalmia neonatorum	54
22. Haematospermia	55
23. HIV	57
24. Vulval lichen sclerosis	58
25. Vulval intraepithelial neoplasia	59
26. Vulval vestibulitis	60
27. Vulvodynia	61
28. Vulval dermatitis	62
29. Sexual history taking in Primary Care	63
30. Confidentiality issues	65
31. Insurance reports	66
32. Young people	67
33. Chaperones	68
34. Which swabs?	69
35. Useful resources	70
36. Appendix 1: BASHH Guidance on STI tests in Primary care	71
37. Appendix 2: Blood Borne Virus (BBV) Testing in Primary Care	76

Foreword

A growing number of Sexually Transmitted Infections (STIs) are being diagnosed in General Practice in the UK, and there is an increasing engagement of GPs in managing Sexual Health, as encouraged by the National Strategy for Sexual Health and HIV.

The Royal College of General Practitioners seeks constantly to encourage, foster and maintain the highest possible standards in general medical practice. This new document, a joint initiative between the RCGP and the British Association for Sexual Health and HIV, has been written by a doctor with experience of both General Practice and GU Medicine, and addresses the need for accurate information about STIs to be readily available in surgery.

I am delighted to welcome it, and as a practising GP I know that I will find it useful, as it provides a quick reference guide. It may also be of use to Practice Nurses and to doctors working in other areas, such as A&E, Family Planning, HM Forces and the Prison Service.

Dr Mayur Lakhani

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March 2006

Preface

I've always thought that "GP" should stand for "Great Pragmatist". GPs handle uncertainty and make pragmatic decisions every day. This document originated from notes I'd written for local GPs in my PCT, to help with pragmatic management of STIs in a Primary Care setting.

It has been based partly on guidelines written for Secondary Care, issued by the Clinical Effectiveness Group of the British Association for Sexual Health and HIV (BASHH). I have adapted some of these to make them more appropriate for Primary Care, and I am very grateful for the feedback of each BASHH author on my adaptation of their work. I have added other information that I think is of relevance to Primary Care and additional references have been credited where appropriate.

This booklet has been written in an informal and sometimes shorthand way, designed to be quick to use during a GP consultation. It is not meant to turn you into mini GU Physicians, but simply to raise awareness of STIs and help you decide on the best management in your surgery. In many cases, the ideal management will be to refer the patient to GU Medicine. However, with increasing skills and improved access to more sensitive, and sometimes less invasive tests in General Practice, there is scope for more to be done in the GP surgery. There will also be those situations where a pragmatic, rather than ideal approach will be required (eg: the Friday evening situation) and this document seeks to inform the practitioner accordingly.

I hope that it encourages dialogue with your local GU clinics, with your Pathology labs and with your patients. Perhaps by raising awareness and providing management options, the rising incidence of many STIs might help to be addressed. I hope this document proves useful and I look forward to updating it on a regular basis.

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The UK guidelines on sexually transmitted infections and related conditions were originally published in 1999 in the journal *Sexually Transmitted Infections* published by the BMJ publishing group (Sex Transm Inf 1999; 75 suppl 1) and some have since been updated on the BASHH website www.bashh.org

Royal College of General Practitioners Sex, Drugs and HIV Task Group

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Dr Margaret McCartney

Dr Kate Shardlow

Dr Ewen Stewart

1. Male urethral discharge

Background

Based on information from reference 1

Urethral discharge is a result of urethritis which is usually due to a sexually transmitted infection.

Urethritis can produce the following symptoms (not all may be present):

- Urethral discharge – (ranges from mildly mucoid to purulent+++)
- Urethral “itch” / discomfort
- Dysuria – please don’t assume dysuria in a male is always a UTI!
A sexually active man c/o dysuria **must** have STIs excluded

Infective causes (you cannot reliably distinguish these clinically):

1. Chlamydia
2. Gonorrhoea (also known as “gonococcus” or “GC” for short)
3. NSU – this is really a diagnosis of exclusion after GC and Chlamydia have been ruled out
 - lots of different organisms can cause this, such as ureaplasma, mycoplasma, TV, yeasts, herpes, anaerobic balanitis

Management

- Refer to GU

or

- If an urgent (< 48 hrs) appt is not possible then consider:
 - taking tests for STIs (ideally after pt has held urine > 4 hrs)
 - and then treating empirically (see below)

Note:

- This is not ideal, but is simply pragmatic especially if it is a Friday evening of a long Bank Holiday weekend when urgent GU access may be difficult
- Treating an STI promptly, not only alleviates symptoms but also halts the subsequent spread of infection
- If you decide to treat a presumed STI, you must attend to the process of notifying recent sexual partners, who may be unaware they might be carrying an asymptomatic infection. At the very least, this involves telling the index patient they should abstain from sex until recent sexual partners have been checked / treated, and that those partners should seek medical advice. Water-tight partner notification is difficult to achieve in General Practice and is probably best left to GU clinics

Tests

You should talk to your local lab / clinic about which swabs to use – see also the *Recommendations for STI Testing Primary Care* appendix in this booklet (page 71).

1. Urethral swabs for GC (charcoal swab) and Chlamydia swab or 1st pass urine (NAAT test)
2. Consider a first pass urine – to look for “threads” (these are strands of mucus / pus suspended in urine. They can be a useful clue for urethral inflammation, but this is NOT very sensitive or specific and should not be relied upon as a sole diagnostic criteria for urethritis)

Male urethral discharge

Treatment

- The Rx for chlamydia and NSU is:

AZITHROMYCIN 1 g po stat

or

DOXYCYCLINE 100 mg po bd 7/7

- The Rx for uncomplicated urethral gonorrhoea is currently (this may change):

CEFIXIME 400 mg po stat

So...

- **Very purulent discharge? Suspect GC*, (especially if recent SI abroad). Treat for both GC and Chlamydia / NSU just in case (this may well be over-Rx, but is pragmatic in a GP setting)**

Rx: CEFIXIME 400 mg po stat

plus

DOXYCYCLINE 100 mg po bd 7/7 or AZITHROMYCIN 1 g po stat

- **Mild symptoms? Suspect chlamydia or NSU* and await GC swab result**

Rx: DOXYCYCLINE 100 mg po bd 7/7

or

AZITHROMYCIN 1 g po stat

* (I know I've said you can't tell clinically, but this Rx is erring on the side of caution, really)

Note:

- Advise pt to tell partner(s) to attend GU clinic (? or see GP) for Rx. Consider giving the pt a handwritten note(s) with date of diagnosis and Rx given. The index pt may then give this to contact(s) to hand to their doctor.
- Consider FU (? GU / ? GP) in 2 weeks (→ Rx compliance, partner notification, symptoms resolved? etc)
- Advise pt NO sexual encounters at all, until given all clear (not even with a condom, as we know that "fumbling" can occur before a condom is put on, and this may be enough to transfer infectious agents! Condoms can also split) "No sex" includes **all** genital-mucous membrane contact (so no oral sex either). I tell my patients "no sex at all, not even with a condom, and not even oral sex. Just play Monopoly® with your partner – and don't land on their waterworks!" This usually raises a smile and hammers home the message of abstinence until the infection has cleared.
- They may not attend for follow up, so when you Rx them initially, advise no sex until 7 days after Rx finishes and symptoms resolved and partner successfully treated. Document this.

Male urethral discharge

Partner notification²

How far back you trace depends on what the diagnosis is and when the man developed urethral symptoms

■ Gonorrhoea

- symptoms? – all sexual partners in previous 2 weeks
- no symptoms? – all sexual partners in previous 3 months

■ Chlamydia

- symptoms? – all sexual partners in previous 4 weeks
- no symptoms? – all sexual partners in previous 6 months

■ NSU (ie: urethritis that was neither Chlamydia or Gonorrhoea)

- symptoms? – all sexual partners in previous 4 weeks
- no symptoms? – all sexual partners on previous 6 months

These figures are arbitrary as it is not known for sure how long asymptomatic carriage can be. Common sense should be used in assessing which sexual partners may have been at risk, and sometimes longer time periods may be involved. Talk to your local clinic if concerned.

Ideally, partner notification should be pursued in all patients, preferably by a trained Health Advisor in GU medicine, who can also document action and outcomes. This applies, to a greater or lesser degree, to all STIs. For the time being, water-tight partner notification remains difficult to achieve in Primary Care. You should at least be aware of the need for it and document that you have discussed this with the patient.

References

1. Sexually Transmitted Infections
Holmes *et al.*
McGraw-Hill 1999
2. UK National Guidelines on Sexually Transmitted Infections and closely related conditions
Clinical Effectiveness Group
British Association for Sexual Health and HIV
www.bashh.org/guidelines

2. Abnormal vaginal discharge

Background

Acknowledgements to Prof Cathy Ison for advice with this chapter.

This chapter refers to women of reproductive years (beware vaginal discharge in the post-menopausal woman – Ca?)

Some women may simply be noticing physiological discharge, so it is always important to take a careful history.

With abnormal vaginal discharge, it is estimated¹ that:

- 1/3 cases: due to candida
- 1/3 cases: bacterial vaginosis
- 1/3 cases: STIs or physiological

History

(See table 1 for clues to diagnosis)

- Consistency / itchy / malodour / cyclical?
- Sounds physiological? – reassure, but examine if necessary
- Sounds like Candida? – pragmatically, consider giving Rx straight away if you think this is the likely diagnosis, but review and examine if Sx persist (→ recurrent candida? recurrent herpes? Lichen sclerosis?)
- Blood stained
- Abdominal pain / fever / deep dyspareunia / irreg bleeding
- Malodour*
- Post menopausal
- Recurrent*
- Other symptoms / diagnosis unclear

} examine pt

Examination

(See table 1 for clues to diagnosis and fig. 1 for a management plan)

- Appearance of discharge
- Evidence of cervicitis? (see Chlamydia chapter) – take endocervical swabs for Chlamydia and gonorrhoea, as well as an HVS
- Retained foreign body? (remove and consider Metronidazole if malodour, however, this isn't always needed once the foreign body is removed)
- Do PV if abdominal pain (PID? Treat early if you suspect PID)

* For recurrent malodorous discharge that has previously been diagnosed as bacterial vaginosis and is recognised by the pt as being an uncomplicated recurrence, consider simply giving Rx rather than examining. This is pragmatic management and must be assessed on an individual clinical basis.

Abnormal vaginal discharge

Investigations

pH

- Normal vaginal pH is up to 4.5 (← kept acidic by friendly lactobacilli)
- It's an indicator of vaginal ecology, but is not very specific
- It can be raised with local blood, semen and cervical secretions
- Raised pH can give you clues about BV and TV (→ altered ecology).
- Raised pH can also indicate Chlamydia or gonorrhoea, so if raised, check for these too (→ endocervical swabs, not an HVS)
- To measure vaginal pH, take a swab, rub it along the lateral wall collecting some discharge, then rub it onto pH paper (see page 69 for supplier).

High Vaginal Swabs

- Much used by GPs – but poor evidence of it being useful!
- Not always used in GU clinics – partly because it's usefulness is questionable, and partly because GU clinics are able to do near-pt tests like microscopy (which can give 'instant' results for BV, TV and candida) so easily
- May be useful to find micro-organisms that can cause cervicitis / endometritis / salpingitis, so consider taking an HVS in these circumstances, although the most important tests will be endocervical swabs for Chlamydia and gonorrhoea

■ Why is the usefulness questionable?

- some evidence that the information provided by the lab from an HVS isn't exactly what the GP thought it would provide²
- labs may differ in what tests they do and what organisms they report, and also what advice on Rx they may give
- some labs will run more tests than others, some will run more tests when detailed clinical information is given
You should discuss these points with your lab
- Some evidence³ that the diagnostic yield of an HVS is poor except for finding candida, which produces characteristic symptoms anyway (and if it's not producing symptoms, you wouldn't need to treat!)
- Some evidence that the HVS is of limited value in diagnosing BV (and may lead to underdiagnosis if no other diagnostic criteria are used)⁴

So, should GPs take HVSs?

- Not sure!
- Probably useful to confirm organisms that can cause / complicate cervicitis / endometritis / salpingitis, so take an HVS if you suspect these conditions
- May also be useful in persistent vaginitis, for group B strep screening and in post-partum and post-instrumentation infections. It is also of use when trying to prove a diagnosis of recurrent candidiasis.
- Think about why you are taking the swab. If it's for STIs, then take endocervical swabs for Chlamydia and gonorrhoea
- Do not rely on an HVS to diagnose TV – send pt to GU
- If you do send a swab, give the lab as much clinical information as possible. Do not assume that a full range of tests will be run on your sample. Talk to your lab!
- Do not diagnose BV just because *Gardnerella vaginalis* is found on HVS – it is found in 30 to 40% "normal" women

Abnormal vaginal discharge

Other tests

Consider taking air-dried slides:

- A thin smear of discharge on a microscope slide → allow to air dry → send to lab for gram staining (the lab can look for signs of infections on microscopy). Please d/w your own lab first about doing this.

Management

Table 1

	Physiological	Candida*	Bacterial vaginosis*	Trichomonas* (this diagnosis is best made or confirmed in GU please)
Appearance of discharge	clear / creamy (cyclical)	thick white "cottage cheese"	thin grey / white	frothy green
Smell	no	no	Fishy malodour	Fishy malodour
Other Symptoms	no	Itchy, sore, vulval oedema fissures	No (it's an "-osis" not an "-itis")	Itchy Sore vulvovaginitis dysuria
pH (n is 4.5)	< or = 4.5	< or = 4.5	> 4.5	> 4.5
Rx	reassure	CLOTRIMAZOLE 500 mg pv stat + CLOTRIMAZOLE 1% CREAM BD 10/7	METRONIDAZOLE 400 mg po bd for 5 to 7 days or 2 g stat (avoid stat dose if pregnant)	METRONIDAZOLE 400 mg po bd for 5 to 7 days or 2 g stat (avoid stat dose if pregnant)

*See also the individual sections on these conditions.

Refer to GU if:

- You suspect TV (TV should **always** be managed in GU medicine); or
- The diagnosis is in doubt; or
- Sx persist

Abnormal vaginal discharge

The syndromic management of abnormal vaginal discharge in women of reproductive years

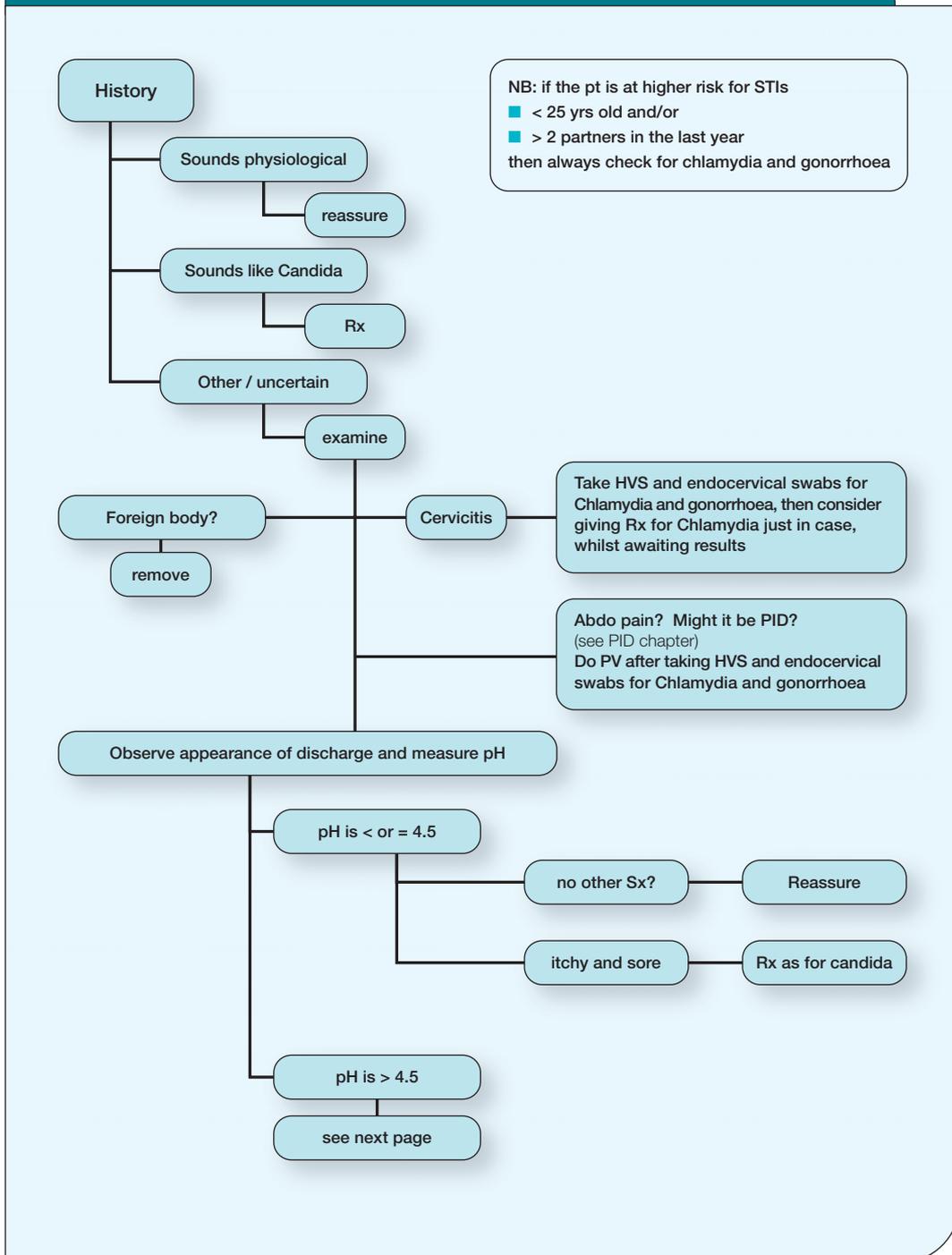
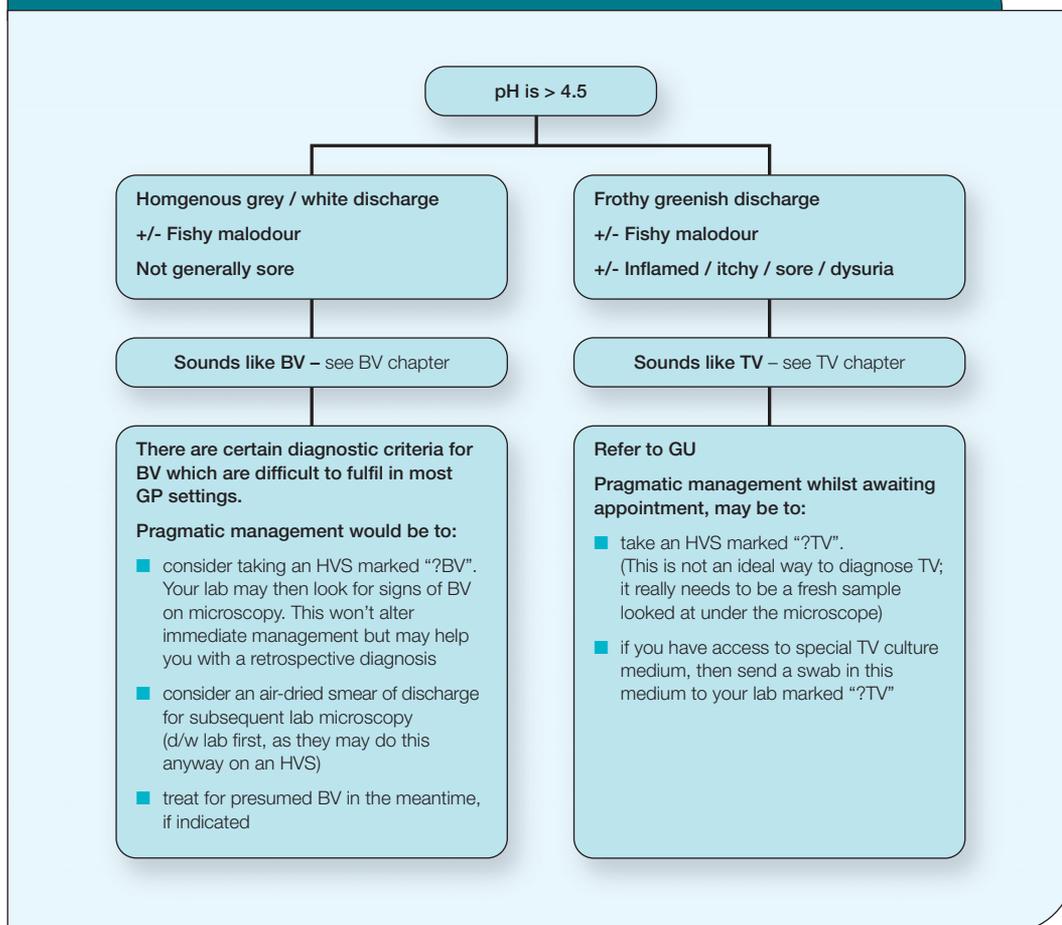


Figure 1

Abnormal vaginal discharge

The syndromic management of abnormal vaginal discharge in women of reproductive years



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1. Vaginitis
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N Eng J Med 1997 ; 337: 1896–903
2. How is the high vaginal swab used to investigate vaginal discharge in primary care and how do GPs expectations of the test match the tests performed by their microbiological services?
Noble *et al.*
Sex Transm Infect 2004; 80: 204–206
3. How useful are high vaginal swabs in general practice? Results of a multicentre study
Jungmann *et al.*
Int J STD&AIDS 2004;15:238–239
4. Can a laboratory diagnosis of bacterial vaginosis be made from a transported high vaginal swab using anaerobic culture and microscopy of a wet preparation?
Crowley *et al.*
Sex Transm Infect 1998;74: 228

3. Bacterial vaginosis

Background

- Possibly the commonest cause of abnormal pv discharge in women of childbearing age
- ? trigger → overgrowth of mixed (mostly anaerobic) bacteria → "good" vaginal lactobacilli replaced
- can arise and remit spontaneously in sexually active and inactive women
(← ? bubble baths, douching, antiseptics, shower gels)

Symptoms

- Offensive fishy smelling watery discharge
- **Not** usually associated with soreness or itching (it is an "-osis" not an "-itis")
- May be asymptomatic

Signs

- Thin grey / white homogenous discharge
- Raised vaginal pH (norm is 4.5)

Complications

- **Pregnant?** → late miscarriage, PROM, preterm birth, post-partum endometritis
- **TOP?** → post-op endometritis and PID (thus screen pre-TOP)
- We know that after IUCD insertion → BV more likely
- But no studies of whether BV → PID after IUCD insertion
- No studies looking at whether Rx'ing asymptomatic women for BV, reduces their chances of getting PID subsequently

Diagnosis

This is difficult in General Practice!

Most GU labs use a diagnosis based on the microscopic appearance of a Gram-stained smear of vaginal discharge, the Hay / Ison criteria:

Grade 1: lactobacilli predominate (this is normal)

Grade 2: some lactobacilli but other organisms present (intermediate)

Grade 3: few / absent lactobacilli – lots of other organisms (this is BV)

Another diagnostic method uses Amsel's criteria:

3 out of 4 makes the diagnosis...

1. Thin white homogenous discharge
2. pH of vaginal fluid > 4.5
3. Release of fishy odour on adding alkali (10% KOH) to drop of discharge on a microscope slide
4. Clue cells on microscopy

Bacterial vaginosis

Both these diagnostic criteria rely on microscopy and, in the case of Amsel's criteria, the use of 10% KOH which is very caustic and potentially dangerous outside of a laboratory setting.

Clearly, these are difficult to do in a GP setting, and the diagnosis of BV in primary care may have to be a suboptimal one based simply on the presence of a malodorous discharge with a raised pH.

See the chapter on Vaginal Discharge for an algorithm for the (pragmatic) syndromic management of abnormal vaginal discharge in community settings.

Treatment

General advice:

- Avoid vaginal douching / shower gels / antiseptics etc, which can affect the normal vaginal flora allowing BV to develop

Treatment is indicated for:

- Symptomatic women
- Women undergoing some surgical procedures
- Some pregnant women

Recommended regimens:

- METRONIDAZOLE 400 mg po bd for 5 to 7 days (ok in pregnancy); or
- METRONIDAZOLE 2 g po stat (avoid this high dose in pregnancy); or
- METRONIDAZOLE 0.75% vaginal gel pv od 5/7; or
- CLINDAMYCIN 2% cream pv od 7/7;

No need for test of cure if Sx resolve (except in pregnancy when it may be wise to repeat a screen 1 month later to ensure eradication).

Screening for BV in pregnancy

Not enough data to recommend routine screening of all as yet, but:

- It may be wise to screen pregnant women with a history of:
 - a previous pre term birth
 - 2nd trimester miscarriage

...ideally early in 2nd trimester. Then:

- treat if found
- then check for it again 1/12 after Rx, to ensure it has gone

Sexual partners

- No need to screen male partner (? female partner – no studies)

Recurrent BV

- Up to 70% can get it again within 3/12 of Rx. ? why
- Refer to GU if very persistent

4. Vulvo-vaginal candidiasis

Background

Cause

- > 80% *Candida albicans*
 - Non albicans sp (eg: *C glabrata*)
- } clinically indistinguishable

10 to 20% women harbour candida species without Sx (no Rx needed if found)

Symptoms (not all may be present)

- Vulval / vaginal itch / soreness → external dysuria, dyspareunia
- Vaginal discharge

Signs (not all may be present)

- Erythema, fissures (beware HSV), satellite lesions
- Discharge, oedema

Diagnosis

- Sx and signs (note: not specific – sometimes allergy, HSV, TV)
- Investigations:
 - pH 4 to 4.5 ie normal. (If higher, think of BV or TV)
 - HVS?

Management

- Avoid local irritants and tight fitting clothes
- Topical 'azoles (→ > 80% cure) (cf: nystatin → > 70%)
- Eg: CLOTRIMAZOLE 500 mg pv stat + 1% cream
- Or: oral FLUCONAZOLE 150 mg po stat (avoid if pregnant)
- No evidence of benefit to treat asymptomatic male partner

Recurrent candidiasis (> 4 attacks / year)

- prove diagnosis with HVS culture
- ? cause (usually no demonstrable ppt'ing reasons)
- consider: diabetes, low immunity, frequent antibiotics
- FLUCONAZOLE 100 mg po once week for 6 months
- or
- CLOTRIMAZOLE 500 mg pv weekly for 6/12

(these Rx's are empirical and not evidence based)

5. Trichomonas vaginalis

Background

This has been kept deliberately brief as you will probably encounter TV only as an incidental finding, perhaps on a cervical cytology report. It may be carried by women for months or even years. Refer to GU if you find / suspect it. Be aware of co-existing infections.

- TV is a flagellated protozoan
- Lives in vagina, urethra, under foreskin, in paraurethral glands
- Almost exclusively an STI: needs direct inoculation

	Males	Females
Symptoms	up to 50% have no Sx ? discharge / dysuria	up to 50% have no Sx vaginal discharge vulval soreness dysuria
Signs	often none	frothy discharge (pH > 4.5) vulvitis inflamed Cx ("strawberry Cx" seen in 2% of patients)
Diagnosis (% sensitivity)	wet mount microscopy (will pick up 30% cases) urethral culture +/- 1st void urine culture (80%)	wet mount (40 to 80%) culture (up to 95%) Cx cytology (but false +ve rate of 30%*, so refer for confirmation)

*This is with pap smears. The false +ve rate may be much less with newer liquid based cytology.

Complications

- Pre-term delivery and low birth weight
- ? enhanced HIV transmission

GP Management

- Refer to GU – it's best GU confirms the diagnosis with microscopy
- You should certainly refer cases where TV seems to have been seen on a Cx smear report
- See the section on the syndromic management of abnormal vaginal discharge

6. Epididymo-orchitis

Background

→ Inflammation of the epididymis +/- testicular inflammation

- Usually (esp if < 35 and sexually active): complication of chlamydia, GC, NSU
- Sometimes (esp if > 35): complication of UTI
- Rarely: blood spread (strep etc), drugs (eg: Amiodarone)

Symptoms / Signs

Swelling, scrotal erythema, pain (usually unilateral, but can be bilateral)

Diff diagnosis

Torsion (esp if < 20yrs), tumour (1/4 tumours present with pain)

Management

Epididymo-orchitis? – refer GU stat

If in doubt (torsion?) get urgent urology opinion (torsion > 4 hrs? – infarcted)

If urgent (ie: same / next day) GU appt not possible, then:

1. Screen for **urethritis**
Sx and signs? Consider looking for threads in 1st pass urine?
test for **chlamydia** (ideally NAAT) and **gonorrhoea** (NAAT or culture)
2. Screen for **UTI** too
urine dipstick and MSU

Treatment

■ If urine dipstick neg, and/or high suspicion of urethritis, give (before results back):

- DOXYCLINE 100 mg po bd 14/7 plus IBUPROFEN 400 mg po tds 14/7
- If you suspect urethral gonorrhoea, give CEFTRIAXONE 250 mg stat intramuscularly as well (I accept this may be difficult for a GP to give – so d/w GU services if concerned). They may advise you to use oral Quinolones. If doing so, do not use NSAIDs as well (interactive risk of convulsions)

■ If urine dipstick +ve, treat as for 'complicated UTI':

- Rx: local prescribing policy (eg: Trimethoprim or Ofloxacin for 14/7)
- Advise patient no sexual contact during Rx and until partners traced and treated.
- Advise – rest (sometimes it's severe enough to warrant a sick note if > 7/7)
 - scrotal elevation / supportive underwear
 - NSAIDs (but avoid with Quinolones)
- Consider FU in GU for contact tracing
- Arrange to see sooner if Sx worsen

7. Pelvic inflammatory disease

Background

- Ascending infection from cervix
 - endometritis
 - salpingitis
- Can also spread in peritoneum
 - peritonitis
 - peri-appendicitis
 - peri-hepatitis (watch out for RUQ pain)

Symptoms

- Lower abdo pain (+/- RUQ pain)
- Abnormal pv bleeding
- Abnormal pv discharge
- Deep dyspareunia
- Dysuria

Signs

- Lower abdo tenderness
- Fever > 38°C.
- Cervicitis
(are you ok differentiating this from an ectopy?!)
(see Chlamydia chapter)
- Cervical motion tenderness
- Adnexal tenderness or mass on pv examination

Symptoms can be:

- Mild to severe
- Intermittent to asymptomatic

Causes

- Mostly Chlamydia or gonorrhoea
- Anaerobes (often 2o to initial STI damage)
- Sometimes Staph or Strep or other organisms

Hence, you can get PID without Chlamydia or gonorrhoea (but male partner still needs Rx just in case).

Be prepared to over-diagnose, and over treat, esp if Cx / adnexae tender. Prompt Rx reduces long term sequelae (tubal damage, sub-fertility, ectopics)

Management

Hx: remember pregnancy risk (beware ectopics), appendix, endometriosis, etc.

Ex: temp, pulse, speculum, pv

Investigations

- Preg test?
- Urine dipstick (send MSU if +)
- Endocervical (and urethral?) GC and Chlamydia tests
- ESR may be helpful but won't alter immediate management

If Hx, Sx and signs lead you to think it might be PID, start Rx quickly.

If Sx severe – admit under gynae (may need iv Rx).

If Sx mild / moderate – refer GU. If urgent appt not possible, then start Rx yourself and refer pt to GU subsequently. The sooner Rx is started, the better.

Treatment

Current recommended Rx is:

- **OFLOXACIN 400 mg po bd 14/7 plus METRONIDAZOLE 400 mg po bd 14/7**
or if pregnancy risk, instead of Ofloxacin, give:
- ERYTHROMYCIN 500 mg po bd 14/7 plus METRONIDAZOLE as above
(Beware mixing OFLOXACIN with NSAIDs – risk of convulsions)
- Rest and analgesia
- IUCD in place? Consider removal if no pregnancy risk (→ quicker resolution of PID??)
- FU 3 days time (If improving, then GU appt after Rx No SI until partner Rx'd)
- Partner to make GU appt for himself (or attend GP for Rx??). The male partner of a female with PID, should be screened for gonorrhoea and Chlamydia and then given empirical treatment for Chlamydia regardless of the results. Other recent sexual partners should also be offered screening. Tracing of contacts within an arbitrary period of six months prior to onset of symptoms is common practice, but longer look-backs may be necessary depending on the sexual history.
- See sooner if Sx not improving (? needs gynae admission)
- If Sx no better despite 2/52 Rx (check compliance, sexual abstinence and partner Rx) then investigate for other causes of symptoms (eg: abdo / pelvic scan, etc)

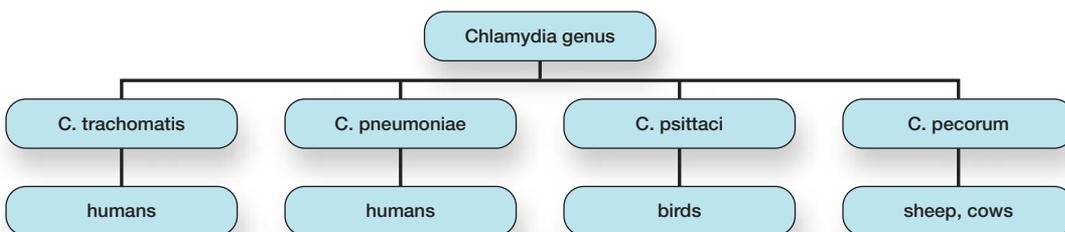
8. Chlamydia

Acknowledgements to Dr Patrick Horner, GU Consultant, Bristol, for extra advice on this chapter.

I make no apologies for making this chapter one of the longest in this document! Chlamydia is currently the commonest bacterial sexually transmitted infection in the UK and its complications have serious implications for the reproductive health of women (and possibly men). You will almost certainly come across it in General Practice.

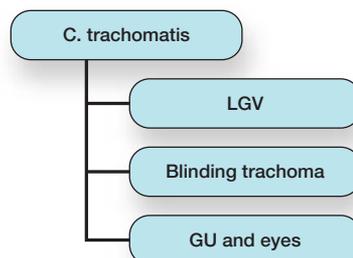
Background¹

- There are 4 different species of Chlamydia.
- One doesn't affect humans, one is a zoonosis (*C. psittaci*), and two produce human disease
- The one that causes genital infection (*C. trachomatis*) can also infect the conjunctivae because it can infect all mucous membranes



Looking more closely at *C. trachomatis* :

- Different subtypes ("serovars") produce different diseases



- **Lymphogranuloma veneruem (LGV)** and **blinding trachoma** tend to be tropical diseases, **genital chlamydia** tends to be more widespread. Having said that, there have been over 290 cases of LGV recently in the UK (to December 2005), mostly amongst men who have sex with men, many of whom are HIV+. It presents as severe proctitis or genital ulceration with prominent inguinal lymphadenopathy. Take a rectal Chlamydia swab using a proctoscope if you have a patient (particularly a gay man) with proctitis. Talk to GU. See Lymphogranuloma Veneruem (Editorial) by Collins, White and Bradbeer: BMJ 2006; 332: 66 for extra information on LGV.

Chlamydia

Chlamydia trachomatis in general

- Obligate intracellular parasites
- Hi-jack cells metabolism → cell death
- Targets columnar or transitional epithelial cells (same as GC)
 - urethra, cervix, rectum, pharynx, conjunctiva
 - can be asymptomatic at **all** these sites! (and we don't know how long for)

Genital Chlamydia trachomatis

- 3 to 5% sexually active women in primary care (perhaps more?) see table below
- ? prevalence in men (but see below)
- risk factors for acquisition:
 - age < 25 (highest rates are in women aged 16 to 19)
 - new sexual partner or > 1 partner recently
 - lack of barrier contraception, ToP

REMEMBER, HIGHEST RATES ARE IN 16 TO 19 YR OLD WOMEN
THINK OF CHLAMYDIA IN THE TEENAGER COMING IN FOR A PILL CHECK !

Some background information on prevalence²

Survey population	Median prevalence (%)
GP attendees	4.5
Ante natal clinic attendees	4.6
Gynae clinic attendees	4.8
Family planning clinic attendees	5.1
Women seeking termination	8.0
GU clinic attendees	16.4

More recent data from the National Chlamydia Screening Programme³ has shown that in the under-25 year olds in non-GUM settings, there are prevalence rates of **10% in women** and **13% in men**.

Chlamydia

Symptoms / signs

Women

- Asymptomatic in 80%
- Vaginal discharge
- Post coital or intermenstrual bleeding (always think Chlamydia!)
- Dysuria (beware sterile pyuria – it may be Chlamydia)
- Lower abdo pain
- Deep dyspareunia
- Cervicitis (can you tell the difference from an ectopy? Some clues...)

	Cervical Ectopy	Cervicitis
Appearance	Flat red patch around the cervical os May be prone to contact bleeding, excess mucus production and infection (→? greater exposure of susceptible columnar epithelial cells). No pus present.	Oedematous congested ectopy, friable and bleeds easily. Mucopurulent discharge sometimes present.
Causes	Temporary hormonal influences (puberty, pregnancy, COC pill) → extension of the soft glandular and more vascular endocervical epithelium, over the paler epithelium of the ectocervix	Infections (most often Chlamydia, sometimes gonorrhoea and others)

NB: Beware the persistent “inadequate” or “inflammatory” cervical cytology report. It might be that there is a cervicitis present that’s causing this. Check for Chlamydia (and gonorrhoea too, if you are in an area of high prevalence).

Men

- Asymptomatic in 50%
- Dysuria, discharge, urethral discomfort, epididymo-orchitis, sexually acquired reactive arthritis

Complications

- PID, ectopic pregnancy, chronic pelvic pain
- Peri-hepatitis (and peri-appendicitis)
- Epididymo-orchitis
- Adult conjunctivitis
- Neonatal conjunctivitis (← transmission to neonate at birth when it can also cause pneumonitis. See ophthalmia neonatorum chapter)
- Sexually acquired reactive arthritis “SARA” (men > women)

Chlamydia

Whom to test?

(this will depend on your PCTs approach to chlamydia screening)

- Those with symptoms (see above)
- Infants with ophthalmia neonatorum or neonatal pneumonitis and their parents²
- ? Opportunistic screening (have a high level of awareness)

What test?

- Enzyme Immuno Assays (EIAs) are now superseded by nucleic acid amplification tests (NAAT)
 - much better sensitivity

■ NAATs – tests vary so d/w your local lab

- A very sensitive way of detecting DNA
- Can be a swab or urine
- Swab? – clean cervix first then rotate swab 360° inside os.
If os is stenosed, then just swab the external os 360°.
Send to lab in transport medium (follow manufacturers instructions)
- Urine? send 15 to 20 ml of **first void** urine (not mid stream). Label specimen “first void”
- Can also be a self-taken vulval swab
- Urine / swab storage: d/w local lab

Although very accurate, they are not 100% sensitive or specific and confirmation of +ve's is recommended in low prevalence populations, if the positive predictive value is < 90%. Your lab should do this.

If you do not have access to nucleic acid tests, you will have to do a (less sensitive) EIA **swab** (not urine) – d/w your lab. You may have to d/w the patient that this is a less sensitive test! Or refer them to a service that can offer a better test.

What to do with a +ve result (local policies vary. You should discuss local management plans with your GU clinic)

Options:

- Refer all pts to GU medicine. They will arrange Rx and screening for other STIs, along with partner notification.
or
- Alternatively, Rx pt yourself (see below) and refer to GU for partner notification and screening for other STIs.
GU should see patients at least 1/52 after Rx finishes (if antibiotics are still in the system it will spoil the pick up of other STIs)
or
- It may be that the patient cannot attend GU services, in which case, pragmatic management would be to treat (see below), after testing for as many other STIs as you can. Management also involves notification and treatment of sexual partners (see below).

Chlamydia

Treatment

Uncomplicated infection (men and women)

- DOXYCYCLINE 100 mg po bd 7/7

or

- AZITHROMYCIN 1 g po stat

Beware drug interactions, especially with the combined pill and combined contraceptive transdermal patch (see FFPRHC guidelines). Repeat test after Rx ("test of cure") not required as Rx is highly efficacious.

Pregnancy (or risk of pregnancy)

- ERYTHROMYCIN 500 mg po bd 14/7 (better than Amoxicillin)

or

- AMOXICILLIN 500 mg po tds 7/7

These are less efficacious Rx's, therefore test of cure IS required 3/52 after finishing Rx. Advise no sex until this test-of-cure sample is negative. Some clinicians re-treat the mother after delivery, just in case.

NB:

- Tell pt NO sex (not even with a condom), including oral sex, or any genital-mucous membrane contact, until partner(s) have been Rx'd.
- Do not forget the contact(s)!! GU is often best placed to do the delicate detective work, and issues of GP confidentiality can be avoided, so consider referral. If this is difficult, then ask the patient to notify his/her partners. You might consider giving the patient a short note on headed paper detailing diagnosis and Rx, for partners to show their own GPs or GU clinics.

Partner notification

Partner notification should be pursued in all patients identified with Chlamydia infection, preferably by a trained Health Advisor in GU medicine. Action and outcomes should be documented.

We do not know how long Chlamydia can be carried without symptoms. Arbitrary cut offs are taken as follows:

Symptoms in women: previous partners in last 6 months need Rx

Symptoms in men: previous partners in last 4 weeks need Rx

No symptoms in women: previous partners in last 6 months need Rx

No symptoms in men: previous partners in last 6 months need Rx

Common sense needs to be used in assessing which sexual partners may have been at risk in these situations, and longer look-backs may be needed.

Those at risk should be informed and invited to attend for evaluation and epidemiological Rx, (even if tests are negative, as no test is 100% accurate).

Please see page 9 for a brief discussion about partner notification.

Chlamydia

Chlamydia worries

Guidance for common questions from patients about consequences

- The natural history of lower genital tract infection in women is poorly understood, and has to be estimated from incidence rates and reported cases of disease
- Chlamydia can have a significant effect on female reproductive health
- Basically, Chlamydia can ascend → salpingitis, which may → complications (see below)
- There seems to be less of an effect on male fertility (but a damaging effect cannot be completely ruled out)
- Chlamydia doesn't always lead to symptomatic salpingitis, but we don't know how many patients have asymptomatic salpingitis (which could still lead to complications)
- Chlamydia may even clear spontaneously (45% clearance after one year of follow up with no Rx, in one study)⁴ But this should **not** be an excuse not to treat. (It may explain discordant results with long-term monogamous couples).

All cases of Chlamydia, and their contacts, should receive Rx.

- Symptomatic salpingitis can lead to the following complications
 - Tubal factor infertility (the risk seems to be cumulative)⁵ roughly:
 - 10% to 12% after 1 episode
 - 20% to 30% after 2 episodes
 - 50% to 60% after 3 or more episodes
 - Ectopic pregnancies (6 to 10 x increased risk)⁶
 - Chronic pain

So, when a woman asks “what are my chances of infertility, doctor?”

- After one episode of asymptomatic Chlamydia
 - it is not known
- After symptomatic salpingitis
 - 10% after 1 episode, 20% after 2, etc

Advice should be to Rx Chlamydia and suspected PID **promptly** to try and limit subsequent complications (see PID section).

Chlamydia

Chlamydia screening

The following is taken from the summary of the annual report of the National Chlamydia Screening Programme (published Nov 2004 by the Dept of Health)⁷ and provides a useful overview of the picture so far...

- In England, the case for screening began in earnest in 1998 with the publication of the Chief Medical Officer's (CMO) Expert Advisory Group report on Chlamydia trachomatis infection, which outlined the public health importance of this disease and the need to screen high-risk individuals.
- Pilots of opportunistic chlamydia screening were undertaken in Portsmouth and the Wirral (1999 to 2000), and confirmed the high disease prevalence among those attending health care settings, and the feasibility and acceptability of such screening approaches.
- Concrete plans for a National Chlamydia Screening Programme (NCSP) gained momentum with the publication of the English National Strategy for Sexual Health and HIV, in July 2001, which clearly outlined the government's commitment to a national roll-out of chlamydia screening.
- In its first year, chlamydia screening was introduced in 10 programme areas across England, involving over 300 sites.
- The results of the first year of screening has confirmed the feasibility of opportunistic screening outside of GUM clinic settings and the significant disease burden in this population, with 10.1% positivity among women and 13.3% among men. These findings are consistent with the pilot studies.
- Fifty per cent of positives and contacts were successfully managed outside of traditional sexual health/GUM settings.
- The national chlamydia screening programme is being implemented within the context of an evolving NHS characterised by devolution of decision-making to the local level; heterogeneity in accountability structures and prioritisation by Primary Care Trusts (PCTs); and performance management by Strategic Health Authorities (SHAs).
- The results from the first year of screening show that the current implementation strategies can work, and a variety of non-specialist clinical settings can be enlisted to implement screening. Clearly the challenge now will be to increase coverage at all levels.

Chlamydia screening is being rolled out nationally to all PCTs now.

Chlamydia

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National Chlamydia Screening Steering Group
-

9. Gonorrhoea

Background

Gk “flow of seed”

I have deliberately kept this brief as most GPs will probably come across gonorrhoea only as an incidental finding. Inner city areas have higher prevalence, so do think about looking for it, particularly in women, who may well be asymptomatic (endocervical swab).

- Gonococci are Gram negative intra-cellular diplococci
- Spread by direct inoculation of secretions from one mucous membrane to another (urethra, endocervix, rectum, pharynx, conjunctiva)
- Non-sexual transmission is exceptional – there is no evidence that it is caught from toilet seats or other shared facilities¹

Symptoms

Men

- Urethral infection will produce symptoms most of the time
- But urethral infection may be asymptomatic in up to 10%
- Pharyngeal and rectal infections are usually asymptomatic

Women

- Often no Sx (up to 50%)
- Vaginal discharge (50%)
- Urethral infection usually asymptomatic but may cause dysuria

Complications

- Endometritis < 10%
- Epididymitis < 1%
- Systemic spread < 1%

Diagnosis

- Culture from infected site(s)
(or NAAT test which is then confirmed with culture)
 - culture sensitivity declines with delay in transport to laboratory (should reach lab within 24 hours, and I accept this may be difficult for some GP practices, especially at weekends)
 - there is no data on sensitivity of community taken samples, but it's probably no higher than 85%¹

Management

Referral to GU is strongly advised, however, if difficult to arrange, then Rx is:

Uncomplicated anogenital infection in adults

- IM CEFTRIAZONE 250 mg as a stat injection
or
oral CEFIXIME 400 mg stat

Plus

- Epidemiological Rx to cover possible concomitant Chlamydia infection
(Eg: AZITHROMYCIN 1 g po stat or DOXYCYCLINE 100 mg po BD 7/7)

Gonorrhoea

- Beware drug resistance – check the bacteriology report for sensitivity
- Penicillin resistance? – consider CIPROFLOXACIN 500 mg po stat if quinolone sensitive (but avoid this in pregnancy)
- Pregnancy? – d/w GU clinic. Consider using CEFTRIAXONE 250 mg IM stat
- Pharyngeal infection?
 - CEFTRIAXONE 250 mg IM stat
 - or
 - CIPROFLOXACIN 500 mg po stat
 - or
 - OFLOXACIN 400 mg po stat
 } if quinolone sensitive
- Pts should ideally be given written information about gonorrhoea
- They should not have sexual intercourse until they and their partner(s) have completed Rx and follow-up.
- Screening for other STIs should be undertaken

Partner notification

Partner notification should be pursued in all patients identified with gonococcal infection, preferably by a trained Health Adviser in GU Medicine. Action and outcomes should be documented.

Male with symptomatic urethral infection:	all partners in past 2 weeks
Male and female patients with infections at other sites:	all partners in past 3 months
Male and female patients with asymptomatic infections:	all partners in past 3 months

Longer look-back periods rarely necessary.

Follow Up

- A follow-up assessment, perhaps a week later, may be helpful to confirm compliance with therapy, resolution of symptoms and partner notification
- Test of cure not needed if sensitive antibiotic used / Sx better / no risk of reinfection
- All Rx's are less effective at eradicating pharyngeal infection, so a test of cure IS recommended if found
- If your test of cure is a culture, then take swab at least 3/7 after Rx
- If test of cure is a NAAT test, then evidence suggests that this is negative within a few days of Rx

References

1. Personal communication
Dr C Bignell
(author of BASHH guidelines on Management of Gonorrhoea in adults)

10. Herpes

Background

Usually presents as:

- multiple painful ulcers
- beware a single painless ulcer (→ primary syphilis?)

Herpes information

- Two types of herpes simplex virus cause ulcers: types “1” and “2”
- Historically 1 → oral, and 2 → genitals
- But both can infect mouth and/or genitals (because of oral sex / autoinoculation)
- HSV is transmitted by close physical contact when an already infected individual is shedding the virus
- Shedding can happen sporadically and not just when there are symptoms
- Most cases of transmission occur without symptoms!
- Having said that, couples can be together for months or years, without virus being transmitted

Primary infection

- This is the first time the virus is acquired, but it may not necessarily result in symptoms
- If it does cause symptoms, this first “attack” tends to be longer and more severe than future recurrences

Symptoms of primary genital infection

- Febrile flu-like illness (prodrome) lasting 5 to 7 days
- Tingling / neuropathic pain in genital area, buttocks or legs
- Extensive bilateral* crops of genital blisters, ulcers or fissures
- Tender lymphadenitis
- May get local oedema
- Untreated, a first episode may last 3 weeks or so
- Diff Dx: candida (→ painful fissures), shingles

*of the lesions of **recurrent** genital herpes, which, like those of herpes zoster, are almost always unilateral.

Herpes

Management

Refer to GU same day – ring to arrange

If urgent (same / next day) appt not possible, then:

- Swab base of ulcer (pop blister if necessary) for HSV (special swab with transport medium is required – d/w local lab. Some labs culture HSV, others look for HSV DNA [NAAT test])
- Saline bathing (1 tsp salt in 1 pint warm water)
- Consider topical LIGNOCAINE 5% ointment if very painful
- Analgesia
- No role for topical anti-virals
- Give oral anti-herpesvirus Rx (such as ACICLOVIR 200 mg po 5 x day for 5/7) if early symptoms (within 5/7 of onset of Sx, or if new lesions still forming)
- Oral VALACICLOVIR 500 mg po bd 5/7 gives higher antiviral levels than Aciclovir, but is much more expensive, as is PENCICLOVIR

Follow up at GU in 2 to 3 weeks (→ pt education / full STI screen)

Tell pt to report to GU sooner if Sx not improving

A useful tip to prevent urinary retention, is to tell the patient to micturate whilst sitting in a warm bath.

The patient help-group website at the end of this chapter has excellent self-help information for patients

Pregnancy and HSV

Danger! – risk of neonatal infection

- Neonatal HSV is usually acquired during delivery from maternal viral shedding, although rarely it may be acquired in utero
- It's most likely to occur with new maternal acquisition of HSV in the final trimester
- It is rare but can be catastrophic
- Sx appear 2 to 28 days after delivery: vesicles, jaundice, encephalitis, DIC

If you have a pregnant woman with herpes, ask yourself:

- Is this a 1st episode or a recurrence? (but this may be difficult to establish)
- What trimester?

then refer / talk to GU if uncertain as to what to do

Herpes

Management of first episode in pregnancy

1st and 2nd trimester?

- Mx pt's according to clinical need (ie: give Aciclovir orally for 5/7 if needed)
 - although it is not licensed for pregnancy, there is substantial clinical evidence over many years to support its use (← informed consent)
- Anticipate vaginal delivery
- Inform antenatal (informed consent → ANC book / midwives / Obstetrician)

3rd trimester? (beware! – risk of neonatal infection)

- Consider LSCS especially if > 34/40 gestation (can still be shedding virus at delivery, even if no visible lesions)
- Consider Aciclovir for mother now (and baby afterwards)
- Inform antenatal **soon** (they may wish to consider LSCS)

Management of recurrences in pregnancy

(Is it proven HSV? Ask pt if she has informed antenatal)

- Maternal Abs give some, but not total, protection to baby
- Neonatal infection can still occur (esp if skin damage from scalp electrodes, etc)
- Hence Obstetrician should always be informed of Hx of recurrent genital HSV
- No role for regular viral swabs in late pregnancy (does not predict shedding at term)
- Symptomatic recurrences are likely to be brief, so aim for vaginal delivery if no lesions at labour
- If vaginal delivery was undertaken and lesions were present at birth, then community midwife and GP should be informed → look out for signs of neonatal HSV in baby subsequently
- Continuous Aciclovir in last 4 weeks of pregnancy may be beneficial (but should only be given with specialist advice as unlicensed use)

Herpes

Managing recurrent Herpes Simplex

- Median recurrence rate after a symptomatic 1st episode is:
 - HSV 2: 0.34 recurrences per month (roughly 4 attacks in next 12 months)
 - HSV 1: 0.08 recurrences per month (roughly 1 attack in next 12 months)

Note: not all laboratories report which type of HSV was found
 - Most HSV outbreaks decline in frequency over time
 - They are mild and self limiting, and Mx should be made in partnership with the patient. Options are:
 1. supportive Rx only (saline bathing, Vaseline) for a few days prn
 2. episodic Rx* (Eg: ACICLOVIR 200 mg po 5x day for 5/7, each attack)
 3. suppressive Rx (Eg: ACICLOVIR 400 mg po bd, 3 month supplies at a time)
 - Ideally, make sure you have a diagnosis before starting long term Rx. The decision to start suppressive Rx is a subjective one, balancing the frequency of attacks against the cost and inconvenience of Rx.
 - Suppressive Rx should be discontinued after a maximum of 12 months to reassess attack frequency. The minimum period of assessment should include 2 further attacks. Patients who continue to experience unacceptably high rates of recurrence may restart suppressive Rx.
- * By the time the pt presents for medical care, the lesions are often healing and antiviral Rx has "missed the boat." Give prescription for oral Rx for next episode and tell pt to start Rx at prodrome, if they can recognise it.

Asymptomatic viral shedding from genitals

- More likely in first 12 months after infection, esp if symptomatic
- More likely if symptomatic recurrences
- More likely in HSV type 2 than type 1
- Shedding diminishes over time
- Shedding may be reduced with suppressive Rx

Pt information on herpes (to be recommended!)

- The Herpes Virus Association
www.herpes.org.uk
0207 609 9061

They have produced an excellent leaflet for patients.

11. Syphilis

Syphilis is a complicated infection, best managed by GU medicine. Refer.

Background

- A rare infection, but rates have increased recently
- From 1998 to 2003 rates increased by 1,058%! (Eng / Wales / NI)¹
- The highest rates are in:
 - men who have sex with other men* (see below)
 - the over 25s
 - certain urban areas (London, Brighton, Manchester)
- Many patients are HIV+ as well (and many do not even know it)
- Transmission can occur easily through oral sex
- If untreated, it can remain infectious for up to 2 years

→ **so BE AWARE!**

*Note

- Not all men who have sex with men will volunteer this to you
- Many could be married or in long-term heterosexual relationships
- Take a sensitive sexual history

What should alert you?

- Symptoms / signs (see below) especially in the above groups

What test should you do?

- Send 10 ml clotted blood to your lab requesting syphilis serology (request syphilis IgM if you suspect very early infection). Serology should be repeated a few weeks later if initially negative, yet strong clinical suspicion of syphilis
- Strongly consider testing for HIV as well
- Syphilis is best managed by GU clinics – talk to yours for advice

Symptoms / Signs²

See fig. 1

- Syphilis is caused by a spiral bacterium called *Treponema pallidum*
- It is spread through close (almost exclusively sexual) contact
- Somewhere between 9 and 90 days after exposure, the site of inoculation becomes a painless indurated ulcer (a “chancre”)
- The chancre defines “Primary” syphilis
- Because the ulcer is painless, it may go unnoticed, especially if it cannot be seen easily (anal area, vagina / cervix, tonsils).
- Rarely, the chancres are actually multiple and painful
- The chancre heals spontaneously

Syphilis

- Soon afterwards the organisms spread systemically and a systemic illness ensues. This is “Secondary” syphilis.
- The commonest manifestation of secondary syphilis is a maculopapular rash which can sometimes affect palms and soles. It tends not to be itchy
- Syphilis was known as the “great mimicker” for good reason – it can present in a variety of ways, especially in the secondary stages:
 - generalised malaise
 - lymphadenopathy, hepatosplenomegaly
 - oral mucous patches (“snail track” ulcers)
 - moist warty lesions (“condylomata lata”) at sites of skin friction (perineal, vulval, under breasts, axillae)
 - patchy alopecia
- By the time the lesions of secondary syphilis are present, serology will almost certainly be positive. It may even be positive when you see a chancre (request an IgM on serology if you see a chancre)
- The mucous membrane lesions, and condylomata lata, are very infectious; it’s no wonder syphilis spreads so easily through close intimate contact and oral sex
- Untreated, syphilis lesions resolve, although they can recur for anything up to 2 years. For this reason, the period of infectivity is given as up to 2 years. This is called “Early” syphilis
- After 2 years or so, a period of clinical latency is reached: the organisms remain in the body, but there are no overt symptoms. This is called “Late” syphilis

Years later, late syphilis manifestations may develop in other systems, so-called “Tertiary” syphilis. Progression may be speeded up with HIV co-infection.

Briefly...

Cardiovascular system

- Aortic incompetence with aortic regurgitation
- Aortic aneurysms

Nervous system

- General paralysis of the insane
- Tabes dorsalis

Skin and bones

- Gummatous (localised vascular granulation tissue) lesions with nodule formation and destructive ulceration.

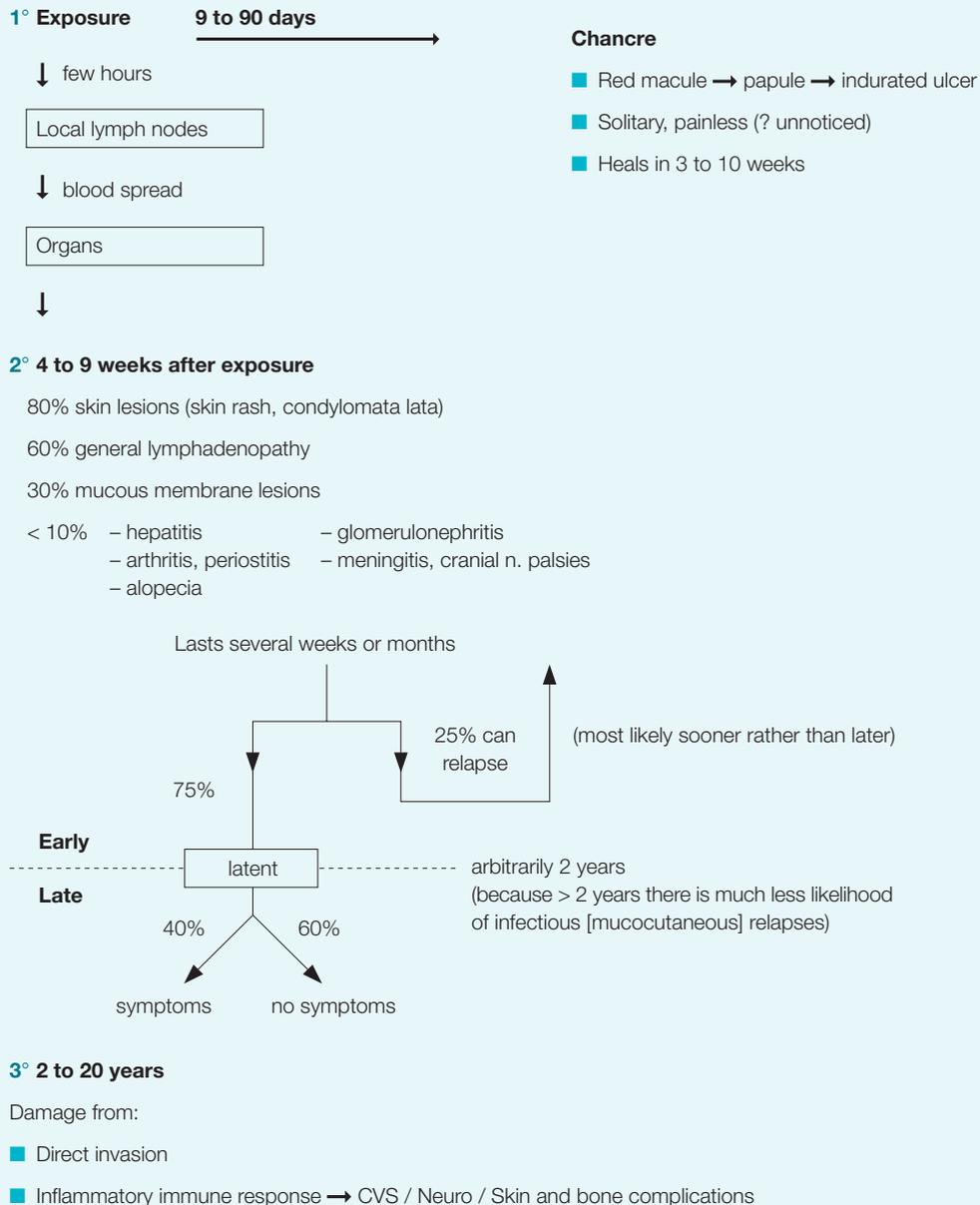
Late stage manifestations are rare because in the course of a lifetime, a patient may receive treponemocidal antibiotics for other conditions, which have activity against syphilis quite by chance.

Take home message

- Syphilis is back and in levels that have not been seen since the 1970s
- Have a awareness for the clinical manifestations
- Think about co-infection with HIV
- Talk to you local GU clinic if concerned about a patient

Syphilis

Figure 1



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12. Warts

Background¹

- Caused by Human Papilloma Virus (HPV)
- HPV → attacks epithelial cells → abnormal cell proliferation
- Different types prefer different anatomical sites

Type of HPV (there are about 100 different types)

Type of HPV (there are about 100 different types)	Skin lesion
1, 2, 4	Solitary plantar warts
2, 4, 26, 27	Common warts on hands
2	Filiform warts on face
3, 10	Flat warts
6, 11	Genital warts (rarely oral)
6, 11	Laryngeal papilloma
16, 18	CIN

Warts in general

- Poor initial immune response, but later “catches up”
(most lesions regress spontaneously, with local lymphocyte infiltration)
- 1/3 of all visible warts disappear spontaneously within 6/12
- Immunosuppression? may → reactivation of HPV
- Infection results in type-specific protection
- Cross – protective immunity? → unknown

Genital warts

- Most infections are subclinical and transient (< 2 years)
- Some adults, without even molecular evidence of HPV, have serum Abs to certain strains, indicating past infection at some time
- Molecular and serology studies report prevalence rates of 30 to 50% in sexually active adults
- Visible warts represent only 1% of infected cases
- The long latent period, just as with herpes, means that the presence of warts in only one partner, does not necessarily imply recent infidelity
- Risk of HPV acquisition rises with increasing numbers of sexual partners
(HPV is rarely found in the genital tract of virgins)
- HPV detection declines with increasing age (← immune response?)
- HPV detection increases with pregnancy, immune suppression and smoking
- Transmission is from direct skin to skin contact
- Non sexual transmission? → not known
 - fomites can transmit hand warts, but ? genital warts
 - no cases of blood-borne transmission
 - peri natal transmission is recognised

Warts

- Clinical manifestations of genital HPV infection:
 - visible warts
 - squamous intra-epithelial lesions (CIN, VIN, PenileIN, AnallN)
- Most visible genital warts are caused by HPV 6 (and HPV 11 to a lesser extent), regardless of morphology and anatomical location
- Rx may reduce infectivity (but ?? asymptomatic shedding)
- Rx options: no Rx, destruction (cryoRx, TCA), anti-mitotic agents (Podophyllotoxin), immune modifiers (Imiquimod cream), surgery
- Clearance and recurrence rates vary – very difficult to compare different treatments
- Generally speaking, warts can recur in a quarter of cases after apparent clearance
- Not all strains of genital HPV produce cervical cancer – there is no benefit in more frequent cervical screening: start at age 25 and be guided by the cytology report each time, even if visible warts are present.

GP Management

- Consider referral to GU, as 20 to 30% pts will have another STI. If difficult, then screen for other STIs yourself if possible (at the very least, a Chlamydia test) and give home Rx (see below)
- Refer for colposcopy if cervical warts
- Refer intrameatal warts to GU
- Refer cases of uncertain diagnosis to GU
- If GU appointment is difficult to arrange and you are confident of the diagnosis of external genital warts, then treatment options in primary care include, after screening for other (possibly asymptomatic) STIs:
 - Cryotherapy – useful if keratinised warts
 - No Rx is an option, as warts may regress spontaneously
 - Home treatments (see BNF for prescribing details) such as:

PODOPHYLLOTOXIN (do not use in pregnancy)

Cost: approx £12 to £15 (BNF September 2005)

This is an antimitotic agent that comes in cream and solution forms. It is applied BD for 3 days followed by 4 days of no application. If ineffective after 4 courses of Rx (ie: 1 month) then try a different method (or refer to GU). Cream is useful for vulval and anal warts, solution is useful for smaller warts and those on the penis where it can be applied with small “dippers.” Both cream and solution may cause local burning and erythema – Rx saline bathing, or 1% Hydrocortisone cream if severe.

IMIQUIMOD 5% CREAM (not licensed for use in pregnancy)

Cost approx £51 (BNF September 2005)

This is an immune modulator. Not suitable for internal genital warts. It is applied nightly for 3 nights a week (usually Mon / Wed / Fri) and then washed off each morning. Treat for up to 16 weeks. It too may cause local erythematous reactions – Rx as above.

Reference

1. Sexually Transmitted Diseases Holmes *et al.* McGraw Hill 1999

Further reading

European Course on HPV associated pathology: guidelines for primary care physicians for the diagnosis and management of anogenital warts *Sex Transm Inf* 2000; 76: 162–168
 von Krogh G, Lacey CJN, Barrasso R, Schneider A

13. Genital molluscum contagiosum

Background

- Caused by a type of Pox virus: direct skin to skin contact
- Can affect any part of the body
- Not a true STI, but genital lesions imply genital skin-skin contact, so consider screening for other STIs
- Anecdotal evidence linking FACIAL molluscum lesions with HIV infection. Consider HIV test

Symptoms / Signs

- 3 to 12 week incubation period
- Discreet smooth pearly lesions with central dimple
- Usually < 5 mm diameter (larger if immunodeficiency)
- If immunocompetent, then spontaneous regression after several months

Management

- No Rx is an option
- Offer screen for other STIs
- Facial lesions? (may indicate low immunity – consider HIV test)
- Rx options: cryo, manual expression of core, piercing +/- phenol
- No need for contact tracing unless another STI is found

14. The ABC of hepatitis

The management of hepatitis is beyond the remit of this booklet. This chapter takes the form of a large table combining data from lots of different sources to simply compare hepatitis A, B and C. It may help to answer some questions that patients may ask. Don't forget, all are notifiable (probably best to inform the pt of this). See also Appendix 2 for advice on testing for hepatitis in Primary Care.

	HEP A	HEP B	HEP C
Reported cases in England & Wales 2002	1,381	1,072	5,917
Prevalence A (natural immunity) B (chronic inf) C (chronic inf)	20 to 50% (inc with age)	0.04% UK blood donors (20% S. Asia)	0.06% UK blood donors (60% IVDUs)
Transmission	Faecal – oral ? Sexual	Parenteral (1:3 risk if eAg+) ¹ Sexual (18% risk) Vertical Sporadic	Parenteral (1:30 risk) ¹ Sexual (0.2 to 2% per year of relationship) Vertical Sporadic
Incubation period	15 to 45 days	6 wks to 6 months	4 to 20 weeks for the very rare cases of acute infection
Infectious period	From 2 weeks BEFORE jaundice to 10/7 after jaundice	From 2 weeks BEFORE jaundice (but often there is none!) until sAg neg which takes up to 6/12, unless "chronic")	From 2/52 BEFORE jaundice (although often none)
Persistent infection?	No	5 to 10% cases	50 to 85% cases
What if pregnant?	Vertical transmission extremely rare No teratogenic effects Inc. rate of miscarriage and prem labour	Vertical trans: 90% if eAg + 10% if eAg – > 9/10 infected infants will become chronic carriers Inc risk misc and prem labour in acute infection	Vertical trans: < 6% ² (higher if HIV+)
Breastfeeding?	Breastfeeding ok (? but consider Human Normal IgM im to baby; you can get it via CCDC or Microbiology Consultant).	Breastfeeding ok as no additional risk of transmission vaccine and HBIG given im at birth to baby if mother is eAg +	Breast feeding? – no firm evidence of additional risk, except, perhaps, if high viral load

The ABC of hepatitis

	HEP A	HEP B	HEP C
General advice to pt	No food handling or UPSI during inf period	Avoid sexual contact until sAg negative (unless partner has Ab) 18% infection rate for regular partner of pt with acute Hep B	Do not donate blood / semen / organs Avoid sharing toothbrushes and razors. Cover open wounds Avoid xs EtOH. Give Hep A&B vaccines
Follow up	Acute inf? See at 1 to 2 weekly intervals until LFTs normal (usually 1 to 3 months)	Acute inf? as for Hep A Chronic inf? (ie: sAg > 6/12) – refer gastro	Acute inf? as for Hep A (rare to get acute hep C) Chronic inf? – refer gastro
Diagnosis	Hep A IgM	Hep B core Ab IgM sAg eAg (up to 6/12 window)	Hep C Ab (up to 6/12 window) ² If + → do virus PCR (d/w gastro)

References

1. UK Health Departments. Guidance for Clinical Healthcare workers: Protection against infection with blood-borne viruses. Recommendations of the Expert Advisory Group on AIDS and the Advisory Group on Hepatitis. HMSO 1998
2. Hepatitis C: Essential information for professionals and guidance on testing DoH July 2004 www.dh.gov.uk/publications_gateway_ref_3234

15. Pubic lice

Background

Caused by the crab louse *Phthirus pubis*, spread by close body contact
Incubation period from 5 days to 5 weeks (sometimes longer and asymptomatic)

Symptoms / Signs

- Adult lice infest strong hairs (pubic hair, body hair, eyebrows, eyelashes)
- Eggs are strongly attached to the hairs
- There may be no Sx or the lice may be spotted with alarm!
- There may be pruritis due to hypersensitivity
- Look for lice faeces in underwear (looks like sprinkled pepper)

Treatment

Refer to GU to screen for other infections

If appt not possible, then try and screen for STIs yourself (at the very least, a Chlamydia test), and then treat with...

- MALATHION 0.5% AQUEOUS SOLUTION to whole body. Allow to dry naturally and wash off in 12 hrs.
A 2nd application after 3 to 7 days may be advisable
- Infestation of eyelashes can be Rx'd with PERMETHRIN 1% lotion keeping the eyes closed during the 10 min application. Alternatively, paraffin eye ointment will suffocate the nits
- Dead nits may remain adherent to hairs, and do not imply Rx failure
- Pt's should avoid close body contact until they and their current partners have been treated
Partners from the previous 3/12 may also need Rx

Consider FU in GU after 1/52 or so (non urgent), to perform full STI screen.

16. Genital scabies

Background

Caused by the mite *Sarcoptes scabiei*

- Skin to skin contact (can't survive off human host > 72 hrs)
- Unlikely to be spread by clothes, towels, bedding etc. (except Norwegian scabies)
- Can affect any part of the body

Symptoms

- Main one is generalised pruritis, esp at night. Can take 6/52 to develop (→ hypersensitivity reaction to excreta, absorbed into skin capillaries)

Signs

- Erythematous genital papules / nodules
- Silvery skin burrows (look at inter-digital folds, wrists and elbows)

Management

If you see signs of scabies on genitals, other STIs may be present, so refer to GU for full screen.

If appt not possible then screen for other STIs if you can (at the very least, a Chlamydia test) then treat:

- Rx: PERMETHRIN 5% dermal cream to whole body from neck downwards, wash off 12 hrs later
- If hands washed in soap within 8 hrs of Rx, they should be re-Rx'd with cream
- Do not have a hot bath before applying cream (risk of systemic absorption after vasodilatation)
- May need to repeat Rx 1/52 later
- Permethrin is safe in pregnancy and breastfeeding
- Pruritis may persist – use Crotamiton 10% cream and/or oral antihistamines.
- Wash potentially contaminated clothes / bedding at high (> 50°C) temp, especially if Norwegian scabies
- Sexual and household or institutional contacts should also be Rx'd at same time
- Consider GU follow up for full STI screen (other STIs may well be present with no Sx)

17. Balanitis

Inflammation of the glans penis (+ foreskin? = “balanoposthitis”)

This section is very brief and is included simply to raise awareness of the many skin conditions that can affect the penis. Refer to GU if in doubt.

	Symptoms	Signs	Notes	Treatment
Candida	“red rash” +/- itch	blotchy erythema	check for glycosuria take swab from under foreskin	topical Imidazoles Rx female partner if recurrent?
Herpes	painful ulcers	ulcers	take HSV swab beware syphilis!	oral Aciclovir saline wash
Circinate balanitis	well demarcated red / grey patches	may have dysuria and discharge (→ beware chlamydia! See SARA chapter)	conjunctivitis? arthralgia? (→ chlamydia?) Refer for STD screen	saline wash (+/- Hydrocortisone 1% cream)
Plasma cell (“Zoon’s”) balanitis	“red rash”	glossy well demarcated orange-red areas, often with small pinpoint spots (“cayenne pepper” spots)	refer if in doubt may need biopsy	topical steroids
Lichen Sclerosus	white patches phimosis urethral stenosis	atrophic white plaques +/- haemorrhagic vesicles	consider referral small (< 5%) risk of malignancy	potent steroids aqueous cream as soap substitute

18. Prostatitis

(Note: it is not caused by STIs)

Background

Acute (bacterial infection 2o to UTI)

or

Chronic → bacterial (complication of acute infection)

→ abacterial (? cause)

1. Acute prostatitis ← UTI organisms (E coli, Proteus, Klebsiella, etc)

Symptoms

An acute severe systemic illness – treat promptly

- Sx of UTI (dysuria, frequency, urgency)
- Sx of prostatitis (perineal / penile / rectal pain, acute retention)
- Sx of bacteraemia (fever, rigors, arthralgia)

Signs

- **Gentle** pr* → tender swollen warm prostate
- Fever, tachycardia

*Do NOT do prostatic **massage** (can ppt bacteraemia)

Diagnosis

- Urine dipstick and MSU
- Blood cultures

Management

- A serious infection – start empirical Rx immediately
- ? admit to urology if severe
- CIPROFOXACIN 500 mg po bd 28 days switched according to sensitivities.
(Do not mix quinolones with NSAIDs → risk of convulsions)

If intolerant or allergic, then use:

- TRIMETHOPRIM 200 mg po bd 28 days

If not improving (beware urinary retention due to prostatic oedema) – admit under Urologists.

- At least 4/52 of Rx needed to prevent chronic bacterial prostatitis
- If managed correctly, acute prostatitis is likely to be completely cured
- When better, refer for investigation of urinary tract
- No need to trace sexual partners, as not sexually transmitted

Prostatitis

2. Chronic Prostatitis

Definition: signs > 6/12 (although diagnosis often made sooner than this)

- Chronic bacterial prostatitis – failure to resolve acute infection
- Chronic abacterial prostatitis – ? cause (? persisting Ag inside prostate)

Symptoms

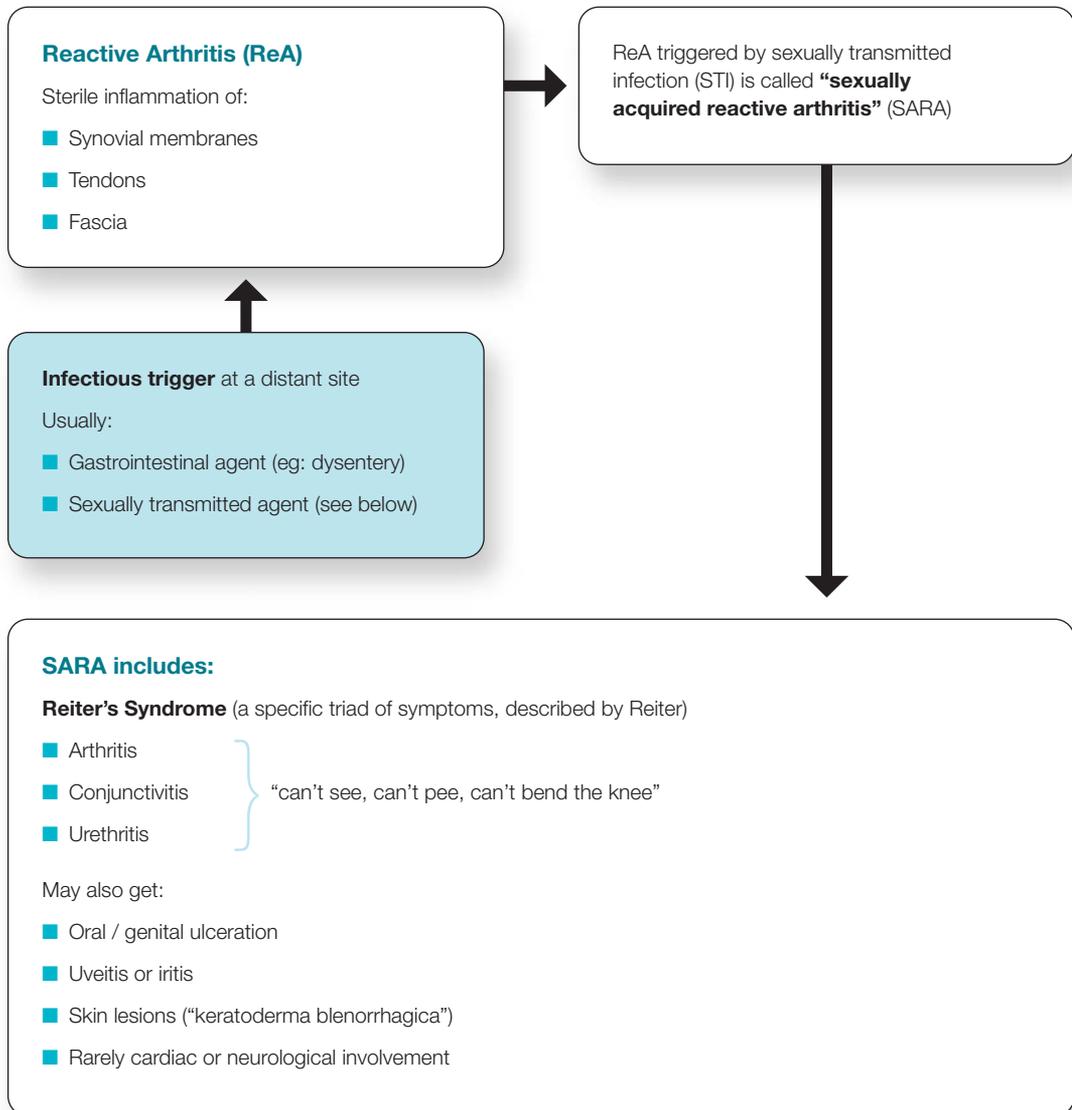
- Perineal pain
- Penile pain (esp at tip)
- Lower abdo pain
- Testicular pain
- Ejaculatory discomfort / pain
- Rectal / lower back pain
- Dysuria

Management

- Refer to Urology

19. Sexually acquired reactive arthritis (SARA)

Acknowledgements to Dr Elizabeth Carlin, GU Consultant, Nottingham, for extra advice on this chapter.



Which organisms?

- Chlamydia (up to 70% cases of SARA)
- Gonorrhoea (up to 16%)
- ? others

Which patients?

- Men > women 10 x (under-recognition in women may be a problem)
- HLA B27 gene? → 50 x increased susceptibility

Sexually acquired reactive arthritis (SARA)

Clinical features

History

- Ask about past or family Hx of spondyloarthritis or iritis
- Sexual contact, usually with a new partner, within 3/12 prior to the onset of the arthritis
- Gut infection? (look for GI trigger as well as STI trigger)

Symptoms

- Systemic Sx of malaise, fever, fatigue in about 10%
- Onset of arthritis within 30 days of sex in most patients (av 14 days interval between the onset of GU symptoms and the arthritis)
- Recent Hx of urethral discharge and dysuria
- Pain (+/- swelling and stiffness) at one or more (usually < 6) joints
- Joints tend to be knees and feet
- Pain and stiffness at entheses in 1/5 patients (esp posterior and plantar aspects of heels)
- Low back pain and stiffness (10% get sacro-iliitis during acute episode)
- Irritable eyes +/- drop in VA / redness / photophobia
 - up to 50% get conjunctivitis
 - up to 10% get iritis

Signs

- Genital infection (urethritis, cervicitis, epididymitis, etc)
- Arthritis (1 to 5 joints, usually asymmetrical distribution, upper limb involvement is rare if no psoriasis)
- Enthesopathy (esp at tendon attachments to calcaneum)
- Tenosynovitis (esp at fingers)
- Pain on direct sacral pressure (but beware pre-existing back pain)
- Pain and redness of eye (this is usually conjunctivitis, but rarely iritis – refer for slit lamp examination to differentiate)
- Psoriasiform skin lesions
 - typical plaque or guttate skin lesions
 - pustules on soles (keratoderma blennorrhagica)
- Mucous membrane lesions (geographical tongue, circinate balanitis)
- Heart lesions (usually asymptomatic) Eg: pericarditis
- Renal pathology (usually asymptomatic proteinuria, hence do dipstick)

Sexually acquired reactive arthritis (SARA)

Complications

- SARA is usually self limiting (av duration 5 months)
- 50% will get recurrent episodes
- 17% get chronic symptoms
- May get erosive damage to joints → locomotor disability
- Complications are usually due to aggressive arthritis and are more likely if HLA B27+ve
- Acute anterior uveitis can → cataracts and blindness
(rare but important to detect early – get an eye opinion if worried)

Diagnosis

BE AWARE!

- Urethritis in a man (ask about joint pain / sore eyes too)
- Cervicitis in a female
- Skin and joint Sx and signs as above (ask about urethritis)

Management

What to do in General Practice

- Symptoms are self-limiting in most cases but:
 - check FBC *, ESR or CRP, and urinalysis (renal pathology, nephritis?)
 - stool culture?
- Refer for STI screen even if no symptoms (asymptomatic Chlamydia?)
- Refer for eye opinion if eye symptoms
- X-rays of affected joints?
- Consider testing for HLA B27?? (usually done by Blood Transfusion labs)
- General advice – rest, NSAIDs
- Liaise with relevant speciality early
(involve rheumatologist / GUM / dermatologists / ophthalmology etc. as necessary)

*FBC helps to exclude:

- Septic arthritis
- Sickle cell
- Bleeding diatheses

which can all present with swollen joints

20. Sexual assault

Background

'Rape' (this is a legal term, definitions vary in different countries)

Non consensual vaginal, anal or oral penetration by a penis, to a woman or a man
(England and Wales definition)

- Can occur in marriage
- Can only be committed by a man
- In Scotland, "rape" is defined as vaginal penetration, and anything else is "indecent assault"
- In Northern Ireland, "rape" is anal or vaginal penetration with either a man or woman, without their consent

'Sexual assault'

Any non consensual sexual act – not necessarily orifice penetration

In the UK, 17% women and 3% men report sexual assault in adulthood, but it is very much under-reported.

Management of recent sexual assault in General Practice (see fig. 1)

NB: keep careful notes, and record information verbatim, but keep history simple: who, what, when, how etc.

- This guidance should be interpreted with a degree of flexibility depending on your assessment of the physical and emotional state of the patient.
- A pragmatic and compassionate approach is needed: the patient may be trying to regain control after a situation in which control has been lost.
- The benefit to the patient of any investigation, must be weighed against worsening the patient's distress.

Initially you should:

- Attend to any **first aid** for injuries
- Ask does pt wish to provide forensic evidence? If so refer to **Police** or local **"Sexual Assault Referral Centre"** (SARC) if you have one in your area
 - Sexual Assault Referral Centres
 - These centres take forensic tests and offer counselling and can work with police if the pt wishes.
 - Pt's may self refer (telephone first) and may choose not to inform the Police.
 - Go to www.homeoffice.gov.uk then click on Sexual Assault on A – Z index to find a list of SARCs.

Forensic evidence? → YES?

- Forensic tests must be taken **prior** to any medical exam (unless urgent exam needed, eg: vulval bleeding) and must only be taken by those trained to do so.
- DNA evidence useful up to 7/7 post assault, so tell pt:
 - do not wash self / clothes (DNA evidence)
 - oral sex? → don't eat / drink (spoils DNA evidence)
 - take change of clothes (clothing worn during assault will be needed for evidence)
 - OK to take friend / relative (moral support) to Police station / SARC
- before they go, consider:
 - emergency contraception
 - prophylaxis against Hep B (and HIV?)
 - follow up at GU for STI screen (give clinic details)

Sexual assault

Forensic evidence? → NO?

- Emergency contraception
- Prophylaxis against Hep B (and HIV?)
- Examine and treat any injuries
- Refer to GU (or pt to self refer) for next available appt (most clinics will see assault victims asap)

What GU will do:

1. Offer full screen at presentation
2. Do full screen again 2 weeks later to allow for bacterial incubation periods
3. If pt does not wish to attend again in 2 weeks time, prophylactic antibiotics may be given at first visit
4. GU will also give Hep B vaccines and will follow up serological tests

Initial GP management of recent sexual assault

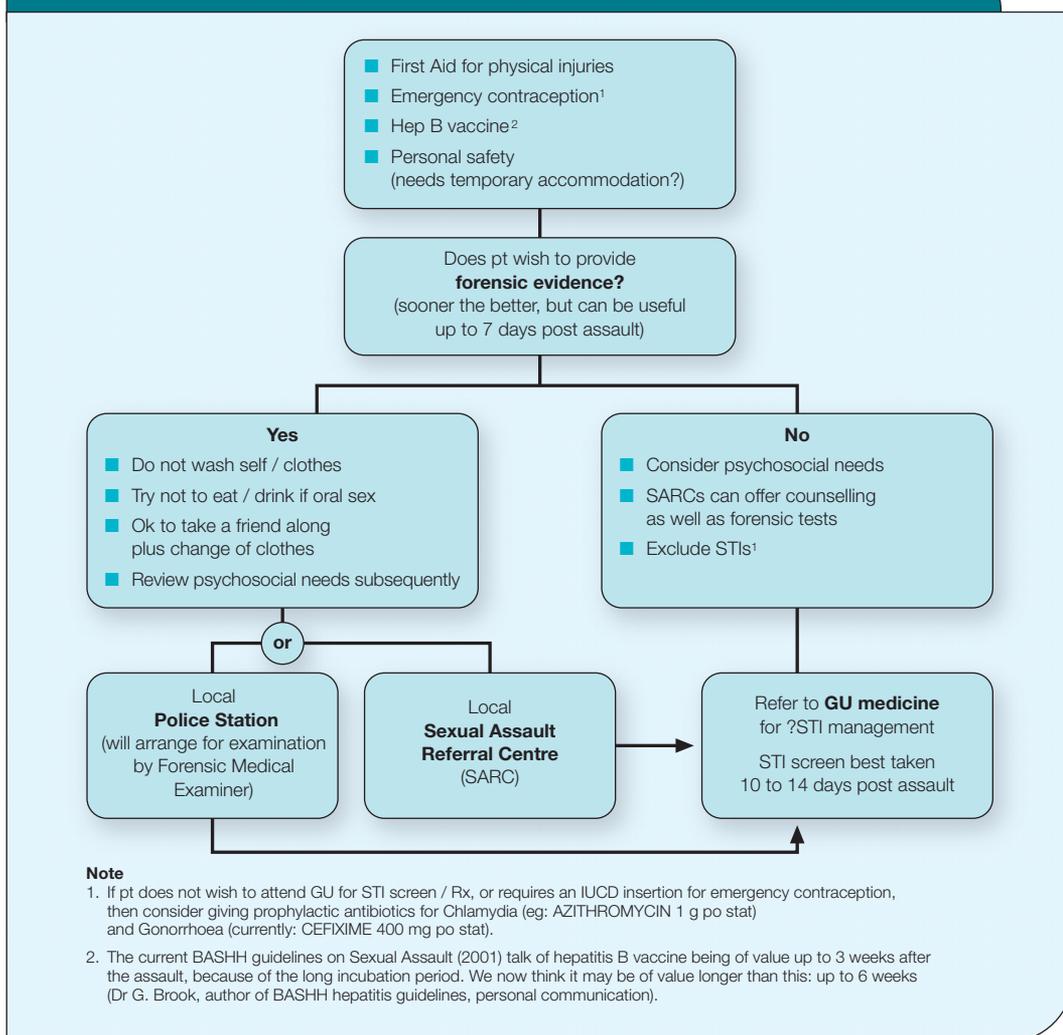


Figure 1

Sexual assault

Useful contacts

Rape Crisis Federation

Will put women in touch with nearest counselling service
0115 900 3560
www.rapecrisis.co.uk

Relate

If violence is less severe or threatened, domestic counselling may help
0845 130 40 10

Women's Aid National Domestic Violence Helpline

24 hr helpline for domestic violence victims
0845 7023 468

Survivors UK

Helpline for **male** victims of sexual assault
0207 833 3737

www.met.police.uk/rape/advice

Has very useful information for both healthcare workers, and victims of assault

www.careandevidence.org

Very useful website for healthcare workers, with excellent flowcharts on management, for those who may be the first to be told of an assault by a victim

21. Ophthalmia neonatorum

Based on information from reference 1

Definition: sticky eye in neonate < 21 days old

Causes: during birth (chlamydia, GC, rarely HSV)
after birth (Staph aureus, strep pneumoniae)

Management

- Swabs for bacterial culture and chlamydia
(the CMOs Expert Advisory Group on Chlamydia² recommends all infants with ophthalmia neonatorum or neonatal pneumonia are screened for Chlamydia)
- Don't forget the parents too, if the baby is Chlamydia +ve!
- Ophthalmia neonatorum is a notifiable disease

Clinical findings

Chlamydia

- Sticky eye 5 to 14 days after birth (sooner if PROM)
- Can be unilateral
- Risk of simultaneous infection at other sites
(eg: lungs → pneumonitis - beware tachypnoea) so give **systemic** Rx
- Pneumonitis usually presents later than conjunctivitis (4 to 12 weeks)
- Rx: ERYTHROMYCIN 50 mg / kg daily in 2 to 4 doses for 14/7 (see BNF)
- Re-check eye swab 3/52 after Rx finishes
- Contact trace (ideally refer parents to GU)

Gonorrhoea

- Acutely purulent discharge 2 to 5 days after birth
- Often more inflamed than with Chlamydia
- Untreated, complications with corneal scarring may occur
- There may also be systemic complications
- D/W Ophthalmology – may need systemic / parenteral Rx
- All infants with gonococcal disease should be tested / treated for Chlamydia infection too
- Contact trace (gentle discussion with parents – refer them to GU)

References

1. Complications of infections in pregnancy and infants
(Chapter 6) in Sexual Health in Obstetrics and Gynaecology
Wilson and Everett (Editor: Walker)
Remedica publishing 2003
2. Chlamydia trachomatis. Summary and conclusions of the CMO's Expert Advisory Group
Metters J.S. editor
Department of Health, London: 1998

22. Haemospermia

Based on reference 1

A fairly common symptom presenting to GPs.

Causes

- Inflammation (prostate, seminal vesicles, urethra, epididymis)
- Calculi of the above
- Systemic (severe ↑BC, clotting problems, drugs)
- Tumours (benign warts, BPH, Ca prostate, Ca bladder)
- Vascular (varicosities, a-v malformations)
- Introgenic / trauma (prostate Bx, vasectomy, local trauma)
- Unknown (fewer cases nowadays if fully investigated)

History

- Amount, colour, duration, frequency
- How observed? (exclude sexual partner as source – condom test)
- Any other Sx? (weight loss, STI?, UTI?)
- Drugs – Aspirin, Warfarin
- FHx of prostate Ca?
- TB? Schistosomiasis?

Examination

- BP, temperature
- Abdo masses?
- Genitals
- PR (re-examine urethral meatus after PR – bloody discharge?)

Investigations

- Urine dipstick and MSU
- FBC, U&Es, LFTs, ? clotting screen
- STI screen
- Consider PSA if > 40 yrs old, or if FHx of Prostate Ca

Haematospermia

Management

- Most cases are benign and self limiting – conservative Mx
- Treat UTI or STI
- Refer to urology if > 40 yrs old, or if persistent / recurrent Sx

References

1. Haematospermia: in the context of a genitourinary medicine setting
Int J STD & AIDS 2002; 13: 517–521
Narouz and Wallace

23. HIV

HIV infection rates are increasing and GPs should not be afraid to offer testing in Primary Care. Gone are the days of the HIV test being a secretive affair offered only after “counselling” in specialist units. There are no longer the problems associated with Insurance, provided a test returns as negative (see the Insurance chapter, page 66)

The Medical Foundation for AIDS and Sexual Health (Medfash), a charity supported by the BMA, has produced an excellent booklet called ***HIV in Primary Care*** (published 2004).

It offers advice on, amongst other things:

- Core information about HIV epidemiology
- How to diagnose HIV in Primary Care (lots of pictures)
- Clinical care for the patient who has HIV
- HIV and the GP practice team

I thoroughly recommend all GP practices obtain this booklet.

It will address aspects of HIV that are beyond the scope of this booklet.

It is available free of charge from **www.medfash.org.uk**, or telephone 0207 383 6345.

24. Vulval lichen sclerosis

Background

Inflammatory condition of unknown cause

May be linked to other auto-immune conditions

Symptoms

- Vulval itch / irritation
- Soreness, external dyspareunia
- May be asymptomatic

Signs

- Pale atrophic skin ("cigarette paper")
- Sometimes get erosions, blistering, purpura
- Fissures, hyperkeratosis
- Changes can be localised or in a "figure of 8" around vulva and anus

Complications

- Loss of architecture with anatomical fusion
- Development of Squamous Cell Carcinoma (? risk)

Management

- Skin swabs (esp if excoriated lesions) – check for herpes as well as m/c/s
- Check for diabetes and TFTs
- Auto-antibody screen?
- Consider biopsy (refer gynae or GU)
- d/w pt small risk of neoplastic change – see Dr if skin changes

Treatment

- Refer – GU or Gynae depending on local services
- potent topical steroids – CLOBETASOL PROPRIONATE – mainstay of Rx along with emollients like aqueous cream
- Urgent review if skin changes appearance. Beware SCC.

25. Vulval intraepithelial neoplasia

Background

Associated with lichen sclerosis

Associated with HPV (often type 16)

May develop into SCC

Symptoms

- Burning / irritation / vulval pain
- Sometimes no Sx

Signs

- Clinical appearance can be variable – biopsy if in doubt
- Raised white / erythematous / pigmented lesions
- Can be warty / moist / eroded
- May get multi-focal lesions

Management

- Refer for biopsy
- Pt will need ANNUAL cervical cytology (+ colposcopy?)
(VIN is associated with CIN)

26. Vulval vestibulitis

Background

Unknown cause

Diagnosis made clinically

Symptoms

- Vulval pain at vestibule felt during penetration
(→ tampon insertion, sexual intercourse)

Signs

- Focal tenderness (test with a cotton-bud)
- No signs of acute inflammation

Management

This can be difficult to manage, and I have kept this section brief and mentioned it really just to increase GP awareness.

- Worth referring for STI screen (? ppt'd by candida)
- Refer to GU who can sort out the various Rx options
- It may be worth trying soothing agents (eg: Aqueous cream as an emollient and soap substitute) whilst waiting for the GU appointment
- Observation (up to 50% pt's get spontaneous remission)

27. Vulvodynia

Symptoms

- Vulva pain which is long standing and unexplained
- Often older women (? associated with polymyalgia)
- Unknown cause

Signs

- Vulva appears normal (cf: lichen sclerosis)
- Pain on light touch over the labia (cf: vestibule? = "vestibulitis")

Investigations

- No specific investigation

Management

Difficult! Mentioned here to raise your awareness:

- Consider referral to GU / Gynae
- Worth trying soothing agents such as Aqueous cream as a soap substitute

28. Vulval dermatitis

Aetiology

- Chemical irritant, atopic or seborrhoeic dermatitis
- Candida
- Iron deficiency

Symptoms

- Vulval itch and soreness

Signs

- Erythema
- Lichenification
- Fissuring

Management

- STI screen (exclude TV and candida)
- Serum Ferritin
- Consider referral for patch testing / biopsy

Treatment

- Avoidance of precipitating factors
 - Saline washes
 - Aqueous cream
 - Topical corticosteroids (potency depending on severity of symptoms)
-

29. Sexual history taking in Primary Care

History taking is essential for making any diagnosis and management plan, and sexual history taking is no exception

Background

What is “normal” sexual activity?

What does “normal” mean?! The following reference¹ refers to a survey of 11,000 men and women aged 16 to 44 in Britain, from 1999 – 2001, and provides an insight into sexual behaviour in contemporary Britain.

- 16 to 24 yr olds (both men and women) have highest rates of new partners
- In the previous 5 yrs, the average number of new heterosexual partners, was 3.8 for men, and 2.4 for women
- 1/3 men and 1/5 women reported at least 10 partners so far in life
- 4.3% of men reported paying for sex at some time
- 14% men and 9% women were having concurrent partnerships
- 5.4% men and 4.9% women reported ever having a homosexual contact
- 12% men and 11% women reported heterosexual anal sex in the past year

Compared with a similar survey in 1990, this study revealed the following trends:

- Earlier age of first sexual intercourse
- Increased number of lifetime partners
- Decline in marriage, growth in cohabitation
- Increased partner change and unsafe sex

Basic rules on sexual history taking

- Privacy and the assurance of confidentiality are **essential**
- Many STIs can be asymptomatic, but when symptoms are present (see below), the patient may not link them to an STI, so you may have to raise the subject sensitively
- Do not make assumptions about
 - sexual orientation (a married man may still have sex with other men)
 - age (sexual liberation is not exclusive to the young)
 - anything!
- Sometimes you will need to ask direct questions when the pt doesn't volunteer information – explain why you need to ask something, but only ask what is relevant
- Embarrassment can be infectious – try not to let your own feelings / opinions interfere. Have a non-judgemental attitude.
- Clarify terms: “sex” doesn't always mean peno-vaginal penetration, and many STIs are spread easily from oral or anal sex
- Be aware that condoms are often put on **after** some penetration has already taken place (and condoms also split / come off).
- Be alert to non-consensual sex (child protection issues?)
- Alcohol and drug use can lead to risk-taking sexual behaviour, and financial difficulties may lead to prostitution.

Sexual history taking in Primary Care

Specific questions

1. Symptom history (see also individual chapters)

This list is not exhaustive, and there may be many other symptoms of STIs, such as rashes and arthralgia. Remember that STIs can be present with NO symptoms. I think the important thing is to:

- think about the **possibility** of an STI
- discuss this gently with the patient
- test!

Men

- **Urethritis** can present as:
 - vague urethral discomfort or itch, dysuria, discharge, epididymo-orchitis, reactive arthritis, conjunctivitis (autoinoculation)

Women

- **Cervicitis / endometritis** →
 - intermenstrual bleeding, post coital bleeding, deep dyspareunia, lower abdo pain, ophthalmia neonatorum
- **Salpingitis / PID** →
 - as above plus RUQ (perihepatitis) and shoulder tip (referred) pain, ectopic pregnancy
- **vaginal infections** →
 - pv discharge, itch, soreness

2. Medical History

- Past medical history (including previous STIs)
- Medication (including OTC or illicit drugs)
- Allergies
- Obs / gynae Hx for women

3. Partner history

- When was the last sexual encounter?
- Who with? (traceable or not? male or female? Abroad?)
- What sort of sex (oral, vaginal, anal?)
- Was barrier contraception used for all contact?
- Go back through all partners for last 3 months (to cover most incubation periods). Do not assume gender each time.

NB: Such detailed sexual history taking may not always be appropriate in Primary Care and will, of course, depend on the individual clinical scenario. You may wish to leave the delicate issue of sexual history taking and partner notification to those with more training in GU medicine.

References

1. Sexual Behaviour in Britain: partnerships, practices and HIV risk behaviour. Johnson et al. Lancet 2001 358: 1835–42

30. Confidentiality issues

When dealing with sexually transmitted infections, NHS practitioners become bound by the NHS Trusts and Primary Care Trusts (Sexually Transmitted Diseases) Directions 2000 (applicable only in England) which states:

“Every NHS trust and Primary Care Trust shall take all necessary steps to secure that any information capable of identifying an individual obtained by any of their members or employees with respect to persons examined or treated for any sexually transmitted disease shall not be disclosed..

Except:

a) For the purpose of communicating that information to a medical practitioner, or to a person employed under the direction of a medical practitioner in connection with the treatment of persons suffering from such disease or the prevention of the spread thereof, and

b) For the purpose of such treatment or prevention”

Essentially, this says that you should take **extra** care about confidentiality issues when dealing with STIs. This is easier in GU clinics than it might be in General Practice, and you should especially consider the issues of confidentiality and the **whole** of your practice team (receptionists and cleaners, as well as clinical staff).

Perhaps consider

- A practice policy on confidentiality for all staff members?
- Posters and leaflets reassuring patients about confidentiality (and discrimination)?
- Special posters to target:
 - the under 16s
 - older patients
 - homosexual patients
- The Access to Health Records Act 1990 – beware notes that mention a partner’s STI

What if a patient refuses to tell a partner about an STI that they may have passed on?

This is always a difficult one!

- I think it’s useful to bring up the subject of partner notification, when the patient is being **initially** tested, so they are prepared in advance for any consequences.
- You should discuss the fact that untreated partners, who may have been infected, risk harm to themselves and risk re-infecting the index patient.
- If they still refuse to inform a partner, be guided by GMC guidance (see www.gmc-uk.org) which basically says that disclosure of information without consent is justified if there is exposure to **serious risk**. You may wish to seek guidance from the GMC or your defence union, about whether a specific clinical case constitutes “serious risk.” If it’s a last resort, then you should inform the index patient of your intent to inform their partner.
- Regarding HIV, the GMC says:

“...you may disclose information to a known sexual contact of a patient with HIV where you have reason to think that the patient has not informed that person, and cannot be persuaded to do so. In such circumstances you should tell the patient before you make the disclosure, and you must be prepared to justify a decision to disclose information.”

I suggest you seek advice from a colleague / GMC / Defence Union in all cases.

31. Insurance reports

The thorny issue of whether to disclose previous STIs...

If you are going to fill in an Insurance report (some GPs do not, as they feel it jeopardises the doctor / patient relationship), then follow BMA guidance (see www.bma.org.uk/ethics). Basically, regarding STIs:

1. Insurers should not request, and Drs should not reveal, information about an isolated incident of an STI that has no long term health implications, (or even multiple episodes of non serious STIs where there are no long term health implications.)
2. Other incidents of STIs may have actuarial or underwriting significance, and should be revealed with appropriate consent.
3. Insurance companies should not ask whether someone has taken a test for HIV, Hep B, or Hep C. Doctors should not reveal this information.
4. Insurance companies may ask if someone has tested positive, or is receiving treatment for HIV, Hep B, or Hep C.
5. Lifestyle questions: these are best left unanswered – see above website for advice

You ought to d/w the patient:

- The purpose of the disclosure
- The extent of information to be disclosed
- The fact that relevant information cannot be concealed or withheld

(→ show form to pt **before** and **after** you complete it?)

The BMA and the Association of British Insurers (ABI) have produced an Insurance package for GPs (Oct 2003) which includes:

- A standard covering letter for insurers to send to GPs
- A standard General Practitioners Report form
- Standard consent declaration forms for patients

see www.bma.org.uk/ethics to download this package

Remember:

- You are advised not to fill in a non standard insurance form!
- Beware the electronic reporting system for insurance reports – check the report and edit as necessary

32. Young people

Based on information from reference 1

- 1/4 of young people are sexually active before age 16
- They are the group least likely to use contraception
- Poor awareness of STIs (hence quick Pill check? → discuss Chlamydia!)
- Concern about confidentiality is the biggest deterrent to seeking advice (do you need posters in your waiting room reassuring teenagers?)

Sexual Offences Act 2003

- Became law May 2004
- → Protection for children, vulnerable people, general public
- Laws regarding aiding and abetting a sexual offence
- Applies to medics, teachers, agony aunts, etc.

It does not alter the provision of sexual health advice, or treatment, to young people, including those under 13, so long as you are:

- Protecting the child from an STI
- Protecting their physical safety
- Preventing unintended pregnancy
- Promoting emotional well-being by giving advice

Duty of Care

Doctors, and other health professionals, have a duty of care regardless of the patients age, and are able to provide contraception, sexual and reproductive health advice and treatment, without parental knowledge, to an under 16 year old, provided:

- She / he understands the advice provided and its implications
- Her / his physical or mental health would otherwise be likely to suffer, and so provision of advice / treatment is in their best interests

What if there is a risk to the health / safety / welfare of the under 16? Can you break confidentiality?

Yes, if the risks **outweigh** the right to privacy.

You should:

- Follow local Child Protection Protocols
- Justify any disclosure
- d/w young person first

The decision to break confidentiality depends on the degree of harm and not the age of the pt.

References

1. Best Practice Guidance for Doctors and other Health Professionals on the provision of advice and treatment to young people under 16 on contraception, sexual and reproductive health.
Dept of Health gateway ref 3382
July 2004
2. Lancet 2001 358: 1843–50)

33. Chaperones

Does your practice have a Chaperone Policy? In 2005, guidance was issued by the NHS Clinical Governance Support Team (with input from, amongst others, the RCGP, RCP, RCPsych, RCN, BMA, DH and MDU):

Guidance on the role and effective use of chaperones in Primary and Community Care settings
NHS Clinical Governance Support Team
June 2005

- It is not National Policy, but current “Good Practice” advice
- Acknowledges a **Chaperone Policy** is for benefit of both pt's and staff
- Always offer chaperone where the pt (or you) feel one is required
- Explain why the examination is needed:
 - Eg: why both breast need to be examined if a lump is found in one
 - why pv is needed in a female with abdo pain
 - why testes need examining in a child with abdo pain
- Acknowledges there is no common definition of chaperone
- The role varies depending on needs of pt and healthcare worker
- Need staff training for chaperone role
- If chaperone needed but unavailable, then consider deferring exam
- Lone working? – reschedule unless emergency
- Offers advice with ethnic issues / children / those with learning difficulties
- Gives Read Code advice
- Provides a sample Chaperone Policy

→ Well worth reading!

See www.cgsupport.nhs.uk

34. Which swabs?

Tests vary around the country, so you should be familiar locally with:

- Which swabs to take
- Where to swab
- How to take a sample
- Transport issues

It would be worth:

- Going on a Sexually Transmitted Infection Foundation (STIF) course organised by BASHH (see www.bashh.org for local venues)
- Talking to your local GU clinic and microbiology lab
- I think it's also a good idea to be aware of the sensitivity and specificity of your tests: false positives and false negatives can occur, and an enlightened patient might want to know how accurate their result is. Your lab will help.

pH paper

pH paper (range 3.8 to 5.5) can be obtained from:

1. Lab Sales Company Ltd
Over Industrial Park
Norman Way, Over,
Cambs CB4 5GR
Tel: 01954 233190 or 0845 6011540
Quote "type C5, cat number: 2627 990"
2. Whatman indicator papers pH 4.0 – 7.0 narrow range
7mm x 5mm dispenser cat number: 2600-102A
Available from VWR International (Merck) tel: 0800 223344

See also the appendix:

"Recommendations from the Bacterial Special Interest Group of BASHH: testing for sexually transmitted infections in primary care settings"

35. Useful resources

1. Royal College of General Practitioners
The Sex Drugs and HIV Task Group of the RCGP has an excellent website with links to other resources. Go to www.rcgp.org.uk and follow the directions to group.
2. British Association for Sexual Health and HIV
www.bashh.org
Orientated towards Secondary Care but useful information for Primary Care professionals as well.
3. PRODIGY
Very comprehensive on-line guidance for certain STIs
www.prodigy.nhs.uk/guidance
4. Books
 - Sexually Transmitted Diseases
Holmes *et al.*
McGraw-Hill 1999 (3rd ed)
 - Clinical Practice in Sexually Transmissible Infections
McMillan, Young, Ogilvie and Scott
Saunders 2002
 - Sexual Health Promotion in General Practice
Curtis, Hoolaghan, Jewitt (Eds)
Radcliffe Medical Press 1995
 - Improving Sexual Health Advice
Wakely, Cunnion and Chambers
Radcliffe Medical Press 2003
 - ABC of Sexually Transmitted Diseases
Adler *et al.*
BMJ books 1999
 - A General Practitioners Guide to Genitourinary Medicine and Sexual Health
Sonnex C.
Cambridge University Press 1996 (new edition due out in 2006)
 - Sexual Health in Obstetrics and Gynaecology
Wilson J. and Everett M. (Ed: Walker J.)
Remedica publishing 2003
 - Sexually Transmitted Diseases: diagnosis in color
Wisdom A. and Hawkins D.
Mosby-Wolfe 1997 (2nd Ed)
 - Oxford Handbook of Genitourinary Medicine, HIV and AIDS
Pattman *et al.*
Oxford University Press 2005
 - The Handbook of Sexual Health in Primary Care
Edited by Belfield, Carter, Matthews, Moss and Weyman
fpa 2006
5. Patient information
The fpa provides a national information service on sexual health, funded by the Dept of Health. It provides leaflets, telephone advice and a website, all dealing with STIs, contraception and pregnancy issues.
www.fpa.org.uk
Tel 0845 310 1334 (9 am to 6 pm Monday to Friday)

36. Appendix 1

Primary Care testing guidance written by the Bacterial Special Interest Group of BASHH

(reproduced with permission)

Authors: Prof J Ross, Dr A Robinson and Prof C Ison

Recommendations from the Bacterial Special Interest Group of BASHH: Testing for Sexually Transmitted Infections in Primary Care settings

Practical guidance is given for the most appropriate tests to use in primary care to diagnose sexually transmitted infections. The guidance is adapted from the Sexually Transmitted Screening and Testing Guidelines for UK genitourinary medicine clinics (British Association for Sexual Health and HIV, 2004).

These recommendations are not evidence based but provide a pragmatic and reasonable guide for testing in a primary care setting. More extensive testing is available by referral to a local genitourinary medicine clinic.

All pathology laboratories have their own operating policies. It is essential to discuss with the laboratory the test methodologies used. The processing of samples varies considerably and may depend on the clinical information provided.^{1,2} It is essential to consider these pragmatic guidelines in the context of local variations. There are other guidelines produced from the Health Protection Agency and Association of Medical Microbiologists to inform health care professionals working in laboratories.

The following is guidance based on clinical practice in relation to sexually transmitted infections. More detailed information is in BASHH CEG guidelines for the various organisms and symptom complexes.

References

1. Jungmann E, Johnson AM, Ridgway G, Durrant K, Robinson AJ.
How useful are high vaginal swabs in general practice?
Results of a multicentre study. *Int J STD & AIDS* 2004; 15: 238–9
2. Noble H, Estcourt C, Ison C, Goold P, Tite L, Carter YH.
How is the high vaginal swab used to investigate vaginal discharge in primary care
and how do GPs' expectations of the test match the tests performed by their microbiology services?
Sex Transm Infect. 2004 Jun; 80(3): 204–6.

Appendix 1

What to test for and when

Asymptomatic patients

Those at particularly **high risk** of sexually transmitted infections (STIs) are:

- under the age of 25 and/or
- with a new sexual partner within the previous 12 months

Women

It is advisable to undertake as a minimum a test for *Chlamydia trachomatis*. In areas of high prevalence of gonorrhoea, or if there is a local outbreak, a test for *Neisseria gonorrhoeae* should also be undertaken in high risk patients. Trichomonas is relatively uncommon and usually symptomatic but to exclude all sexually transmitted infections this should be tested for too.

It is not possible to exclude herpes genitalis by "screening."
Lesions should be present to warrant taking a test for herpes.

In asymptomatic patients at present there is no value in taking samples for bacterial vaginosis and candida, neither of which are strictly sexually transmitted.

Men

Ideally in the above risk groups a urine test should be taken to test for chlamydia and gonorrhoea. A positive test for gonorrhoea should prompt referral to a specialist service for a gonorrhoea culture to be obtained for confirmation purposes and antibiotic sensitivities prior to treatment

Symptomatic patients

Women

Symptomatic women in the previously defined high risk groups as above, should have tests for gonorrhoea, chlamydia, bacterial vaginosis, trichomonas and candida.

In symptomatic women above 25 a risk assessment should be undertaken. If tests for chlamydia and gonorrhoea have never been performed it is advisable that whatever the genital symptom/s these should be excluded. The commonest cause of vaginal discharge will be either bacterial vaginosis or candida. If there has been no change in sexual partner since the last test for chlamydia / gonorrhoea, then empirical treatment based on the pH paper result with further investigation if the symptoms do not resolve should suffice. For normal vaginal pH treat as if candida, for elevated pH (5.0) treat for bacterial vaginosis.

In women with urinary symptoms and/or lower abdominal pain, sexually transmitted organisms should be excluded in the high risk group and considered on the basis of a risk assessment in those over 25 with no change of partner.

Men

Urethral discharge and/or dysuria are usually indicative of an STI. Ideally a diagnosis of urethritis needs to be made, for which microscopy of a Gram-stained slide is required (see gonorrhoea). Tests for gonorrhoea and chlamydia are recommended.

Men with testicular swelling or discomfort should have STIs excluded. The commonest cause of these symptoms in men under 40 is *Chlamydia trachomatis*. An MSU is also advisable to exclude a urinary tract organism as a cause of this, especially in the over 40s.

Appendix 1

HIV and Syphilis testing

In patients who come from high prevalence countries or have lifestyle factors (sex workers, gay men, multiple sex partners, women with bisexual partners, sex with person from country of high blood borne virus prevalence, iv drug users, blood transfusions or injection therapy in a resource poor country etc) that put them at higher risk of these infections and/or with symptoms that could be attributed to either of these diseases, syphilis and HIV testing should be offered. Screening for these infections should be considered in high risk groups who are asymptomatic but may be presenting in Primary Care for other reasons.

Hepatitis B

Screening for Hepatitis B should be undertaken as for HIV / Syphilis risk. Those in a risk group should be offered and given a Hepatitis B vaccination if they are susceptible.

Gonorrhoea

- Recommended test:**
- culture or nucleic acid amplification test (NAAT). A positive NAAT should be confirmed using culture.
 - if facilities are available, a slide smeared thinly with discharge and air dried for Gram staining and microscopy may give a rapid diagnosis (d/w your lab first)

Sampling site:

- Men:**
- urethra (plus pharynx and rectum if the history indicates the possibility of infection but by culture only not NAAT)
- Women:**
- endocervix (plus pharynx and rectum if the history indicates the possibility of infection but by culture only not NAAT)

Transportation issues:

- Culture:**
- swab to:
 - be sent in transport media (e.g. Amies, Stuarts)
 - refrigerate while awaiting transportation
 - arrive at the laboratory within 24 hours max.
(NB: loss of viability is inevitable even after 6 hours, so rapid transport is recommended or referral to GU clinic if confirming NAAT).
 - if potential exposure to infection occurred within the past 48 hours then take a repeat swab for culture after 2 weeks

- NAAT:**
- no special precautions (see manufacturer's instructions for details on individual NAATs)

Appendix 1

Chlamydia

Recommended test: – nucleic acid amplification test

Sampling site:

Men: – urethra or urine (urine less traumatic for the patient)

Women: – endocervix (urine or vulval / vaginal swabs are also acceptable with NAAT but not with other methods eg EIA)

Transportation issues: – no special precautions (see manufacturer's instructions for details on individual NAATs).

Syphilis

Recommended test: – enzyme linked immunosorbent assay (EIA)

Sampling site: – blood

Transportation issues: – no special precautions

N.B. serology may take up to 3 months to become positive following infection

Bacterial vaginosis

Recommended test: – Gram stain of a thin smear of vaginal discharge placed on a microscopy slide and air dried (d/w your lab). If pH paper is available, an elevated vaginal pH (> 4.5) is consistent with bacterial vaginosis but lacks specificity.

Sampling site: – swab from posterior fornix or self-taken low vaginal swabs

Transportation issues: – swab to be sent in transport media (e.g. Amies, Stuarts) requesting Gram stain to look for appearances suggestive of bacterial vaginosis or an air-dried smear sent to the laboratory
– refrigerate while awaiting transportation

Trichomonas

Recommended test: – culture

Sampling site: – swab from posterior vaginal fornix

Transportation issues: – swab to be sent in transport media (e.g. Amies, Stuarts) and arrive at the laboratory within 6 hours
– refrigerate while awaiting transportation

N.B a higher detection rate will be obtained if the swab is inserted directly into trichomonas culture media

Appendix 1

Candida

Candida sp. are part of the normal vaginal flora in many women and microbiological confirmation of thrush is not usually required. A vaginal wall swab sent in transport media can be cultured for Candida sp. and its presence would support the diagnosis in a symptomatic patient. The vaginal pH is normal (< 4.5) with candidal infection.

Herpes

Recommended test: – viral culture or nucleic acid amplification test

Sampling site: – swab from genital lesion

Transportation issues:

Viral culture: – swab to be sent in viral transport media (stored in a refrigerator until use)

NAAT: – no special precautions (see manufacturer's instructions for details on individual NAATs)

HIV

Recommended test: – enzyme linked immunosorbent assay (EIA)

Sampling site: – blood

Transportation issues: – no special precautions

N.B. serology may take up to 3 months to become positive following infection

Hepatitis B

Recommended test: – hepatitis B surface antigen
– hepatitis B surface antibody
– hepatitis B core antibody

Sampling site: – blood

Transportation issues: – no special precautions

N.B serology may take up to 6 months to become positive following infection

37. Appendix 2

Blood Borne Virus (BBV) Testing in Primary Care

Written by Dr Ewen Stewart, Sex Drugs and HIV Task Group, RCGP 2006

(reproduced with permission)

Testing for HIV and Hepatitis B and C in Primary Care: back-up information

Who should be tested?

- Anyone requesting a test
- Anyone at risk through unprotected sex, whether heterosexual or homosexual
- Anyone who has ever injected drugs
- People who may have had unsterile body piercing or unsterile medical treatment abroad (especially surgery or blood transfusion)
- All antenatal women (HIV and Hep B)
- Children born to mother infected with BBV
- People with symptoms or conditions that may be associated with HIV (*such as chest infections not responding to treatment, TB, shingles, oral candidiasis, severe gastroenteritis, general malaise or weight loss*) or with HCV (*such as general malaise or lethargy*)
- Regular sexual partners of people with BBVs
- Investigation of abnormal LFTs (after risk assessment)

In the UK, HIV and Hepatitis B have a higher incidence in men who have sex with men and people who have lived abroad, especially in Southern Africa, the Far East and Eastern Europe. Hepatitis C has a high incidence in injecting drug users. There is some evidence of sexual transmission of Hepatitis C, although much less than for HIV and Hepatitis B, (less than 5%).

Reasons to be tested

- Testing can allay anxiety even if the result is positive
- Positive test allows early monitoring and intervention by a specialist if required
- Testing can encourage patient to change patterns of behaviour putting them at risk of infection or further illness (such as drinking alcohol with HCV, or using condoms for penetrative sex)
- Positive HIV and Hepatitis B tests can allow pregnant women to make informed choices and receive treatment to protect the baby

Facts about BBV and the tests

- Initial HIV and HCV tests are for antibodies only. In HCV, 80% (less common in women) will have evidence of chronic active infection on a PCR (viral load) test. In HIV the test always indicates ongoing infection but does not indicate how long for, or the current state of the immune system.
- Tests for Hepatitis B are for antibodies and viral antigens and can show past or current infection.
- After infection, antibodies to HBV and HCV can take 6 months to develop, and for HIV 3 months (= "window period"). Negative test may need to be repeated later if taken during this time.
- HIV has a long natural history and it may be 5 to 10 years, or longer, before an untreated person develops symptoms or signs.
- HCV: 60% of those with chronic infection will develop hepatitis, 16% will go onto cirrhosis over 20 years and 4% to liver cancer. Even without significant liver disease, symptoms of malaise are common.

Appendix 2

Treatments

- HIV – monitoring of CD4 count and viral load allows intervention with combination therapy (3–4 drugs) to control the HIV infection, improve immune function and prevent opportunistic infections. There is no cure for HIV infection but in most cases long term control is possible.
- HCV – current treatment with pegylated interferon and ribavirin for 6 to 12 months results in cure for 40 to 80% depending on viral genotype. Treatment is difficult to take, with significant side effects such as malaise and depression.
- HBV – treated with interferon injections (16 to 52 weeks) or antiviral drugs such as lamivudine (at least 1 year).

Prevention and harm reduction

Use BBV testing as an opportunity to give advice on prevention – infected individuals can pass on infection and can also be re-infected with different viral strains.

- Safer sex and the use of condoms
- Avoiding sharing injecting equipment including spoons, filters, water and needles/syringes.
- For HIV and Hepatitis B, interventions can prevent infection of the unborn child.

Life assurance and mortgage issues

- Negative test results should have no impact and should not be requested by, or supplied to insurance companies (beware computer generated medical reports which may contain this information).
- Positive tests, wherever they are carried out, will make it more difficult, but not impossible, to get life policies.

Potential disadvantages of testing

- Anxiety whilst awaiting result
- Is the timing right? Negative test falsely reassuring in window period or about risk behaviour undertaken. Are there other issues such as drug use or depression that should be dealt with first?
- Positive tests mean facing possibility of illness and death. Rehearse how patients would feel and cope. What support is available?

What to request?

- HIV and HCV antibody (serology) tests
- HBV – full clinical details including the reason for testing and any previous HBV immunisation history will allow the lab to determine the correct antibody and antigen tests to run. Antibodies against HBV surface antigen or core antigen indicate immunity but the presence of surface antigen or 'e' antigen particles indicates active infection.
- HCV PCR – many labs will run this test automatically on all HCV antibody positive tests to see if there is evidence of active infection. In some areas you may need to send another sample for the PCR after receiving the antibody positive test. FIND OUT WHAT HAPPENS IN YOUR AREA.

Getting the result

- Ideally **in person** by the person who carried out the test
- Patient may want to bring someone with them
- How will they cope whilst waiting for the result? – offer or direct to support

Appendix 2

Giving the result

If *negative* check if retesting required due to window period. Discuss how to avoid future risk including HBV and HAV immunisation if required.

If *positive*:

- For HCV check PCR if not done – if negative can offer reassurance but recommend repeat testing at least 6 months later to confirm resolved infection.
- Review pretest discussion and address concerns of the person
- Whom to tell and not to tell? Identify supports.
- For HIV, PCR +ve HCV and active HBV – refer to specialist

Hepatitis A and B immunisation

Anyone who has been assessed to be at risk of HIV, HBV or HCV should be considered for Hepatitis B immunisation. All drug users should be offered immunisation against Hepatitis A and B. Their partners and children should be offered Hepatitis B immunisation. It is not necessary to await HBV serology before commencing immunisation but if current or past infection is subsequently detected no further doses are required.

Other groups recommended to receive HBV immunisation include people who change sexual partners frequently, men who have sex with men, people with HIV or HCV infection, close family contacts of an HBV case or carrier, travelers to areas of high prevalence, people with chronic renal or liver disease, prisoners, people with learning difficulties in residential accommodation and occupational groups at risk. (From Immunisation Against Infectious Diseases, DH, 1996 – The Green Book: <http://www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/GreenBook/fs/en>)
Babies born to mothers who are chronic HBV carriers or who were infected in pregnancy can be protected against infection using HBV vaccine and HBV immunoglobulin.

In general it is advisable to use the super-accelerated (0, 7, 21 days with final dose at 1 year) or accelerated (0, 1 and 2 months with final dose at 1 year) schedules for Hepatitis B immunisation. (See Green Book website for information on post vaccination serology testing)

Appendix 2

BBV test proforma

This proforma is designed to record and prompt appropriate discussion prior to HIV and Hep B and C testing and to ensure fully informed consent is obtained prior to testing. It should be used with the accompanying sheet 'Testing for HIV and Hepatitis B and C in Primary Care: back-up information'

Name: DOB:/...../..... Date of Interview:/...../.....

Reason for test discussion

- Patient request (give reason for concern):
- Risk behaviour:
- Antenatal:
- Investigation of illness:
- Other (specify):

Risk assessment (see 'Who should be tested?' on accompanying sheet)

Nature of risk:

.....

Timing of risk:

.....

Patient knowledge and awareness checklist

- What these initial tests can tell us
- Antibodies take 3 (HIV) – 6 (HBV and HCV) months to develop – repeat test required?
- What further tests may be needed (HCV PCR if ab +ve)
- Natural history and disease progression – impact of treatment
- Monitoring and treatment – chronic illness but not cure
- Harm reduction – safer sex and safer injecting
- Life assurance and mortgage issues including confidentiality
- Patients understanding of risk factors
- Pregnancy issues

Immunisation

Hepatitis A 1st/...../..... 2nd/...../.....

Hepatitis B 1st/...../..... 2nd/...../..... 3rd/...../.....

4th/...../..... (4th dose after 1 year for accelerated courses)

Support and coping considerations

How would you feel if you were positive? What would be the worst thing? Who would you tell?

Is this the right time for a test? Who can offer you support whilst waiting for result and if you get a positive result?

Taking the tests

Window period? yes no

Advised to repeat any test? yes no

Appointment for result/...../.....

Support whilst awaiting result (partner, friend, GP, agency)

Giving the result – see accompanying back-up information

Correspondence may be addressed to:

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Royal College of General Practitioners
14 Princes Gate
Hyde Park
London SW7 1PU
fvanzwanenberg@rcgp.org.uk

This guidance is available at www.rcgp.org.uk