Management of sexually transmissible infections

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The second in this series of articles on sexual health provides some guidelines on the diagnosis and treatment of sexually transmissible infections in adults.

The epidemiology, diagnosis and management of sexually transmissible infections (STIs) are changing rapidly,[1,2] making it difficult for the generalist to keep track. Yet, generalists are required to provide the bulk of care for people affected by common STIs.[3] The Table summarises Australasian, European and American guidelines for the diagnosis and treatment of STIs in adults,[1,4,5] and is designed to act as a ready reference.

The goal in managing bacterial STIs – chlamydia, gonorrhoea, syphilis (Figure 1), and donovanosis (Figure 2) – follows a public health paradigm. That is, we attempt to:

- actively find asymptomatic and minimally symptomatic patients
- cure these patients with antibiotics
- ensure that as many of their contacts as possible are properly managed through contact tracing.[5]

This goal is necessary because of the tendency for these relatively uncommon infections to progress to complications associated with high morbidity, including infections in neonates.[1]

By contrast, the viral STIs – genital herpes and papilloma virus infections – are vastly more common (numbering in the millions of cases in Australia), and the bulk of infected people will come to no harm. National cervical cytology guidelines are in place to detect the few women who are at risk of progression to cervical cancer as a result of a persisting oncogenic papilloma virus infection. Most women and men with genital herpes virus infections will remain undiagnosed and probably minimally symptomatic or asymptomatic.

As we cannot cure viral STIs, the goal of managing people with these conditions is essentially one of symptom control along with patient education and support. Partners are seen only for the purpose of allaying anxiety and, if indicated, screening for bacterial STIs or HIV infection. Occasionally, the selective use of type-specific serology for herpes simplex viruses in partners may help in the management of relationships. Denham recently discussed in *Medicine Today* in more detail the selective use of antiviral drugs to manage genital herpes virus infection.[6] The treatment of genital warts has moved towards patient self-treatment with the cytotoxic agent podophyllotoxin (Condyline Paint, Wartec Cream and Solution) or the immunomodulatory agent imiquimod (Aldara), with cryocautery remaining as a

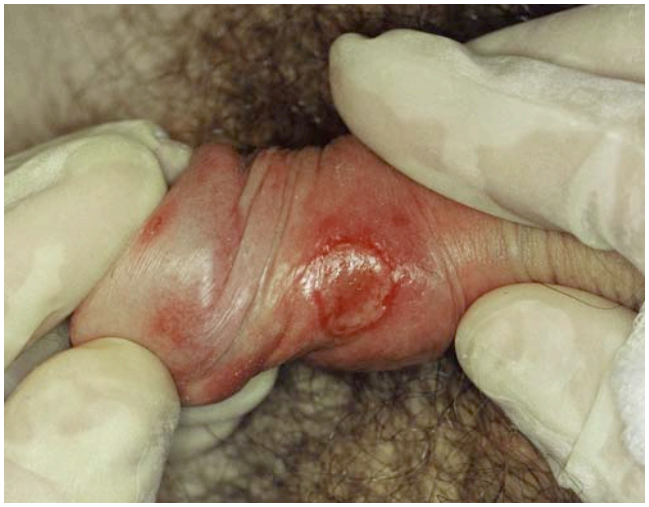

Figure 1. A primary chancre of syphilis associated with ulcers of primary genital herpes. Multiple sexually transmissible infections are common in individuals and need to be excluded by testing.

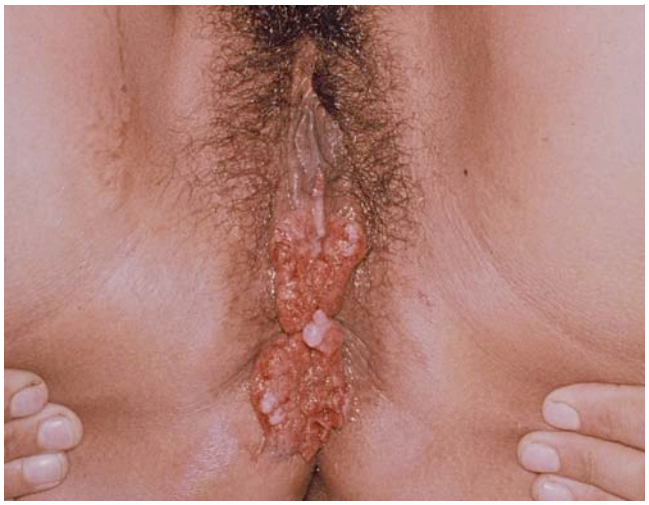

Figure 2. Donovanosis presenting as granulomatous lesions in the perineum, easily mistaken for a carcinoma. This condition is now rare in Australia, and doctors in northern Australia are being asked to maintain their clinical suspicion with the hope of eliminating it over the next few years.

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Table. Management of sexually transmissible infections in adults*

Condition	Diagnosis	Treatment
Chlamydia • Urethritis/cervicitis	Nucleic acid amplification test (NAAT) of swab or urine	Azithromycin (Zithromax) 1 g po stat
• Lymphogranuloma venereum: proctocolitis or ulcer-adenopathy	NAAT of ulcer, anal swab or bubo pus. High titre chlamydia serology if patient symptomatic	Doxycycline 100 mg bd for 21 days
Gonorrhoea	Culture of a swab. Because of limited specificity, NAAT should only be used for high-risk patients	Ceftriaxone (Rocephin) 250 mg IM injection stat (dissolved in 1-2 mL of 1% lignocaine)
Syphilis	Serology. If patient asymptomatic, the screening test needs to be confirmed with a second test For ulcers or other lesions, ask laboratory which specimen to collect (immunofluourescent smear or NAAT specimen)	Procaine penicillin (Cilicaine syringe) 1 g IM injection daily for 10 days, or Benzathine penicillin (Bicillin L-A) 1.8 g IM injection stat, or Doxycycline 100 mg bd po for 14 days
Pelvic inflammatory disease	Clinical, after excluding (ectopic) pregnancy and urinary tract infection	Ceftriaxone 250 mg IM injection stat plus doxycycline 100 mg bd for 14 days plus metronidazole (Flagyl, Metrogyl, Metronide) 400 mg bd for 14 days
Genital warts	Clinical, with biopsy of atypical lesions	Cryocautery (usually weekly), or Podophyllotoxin (Condyline Paint, Wartec Cream or Solution) 0.5% tincture or 0.15% cream bd for 3 days, or Imiquimod (Aldara) 5% cream 3 times/week for ≥6 weeks
Genital herpes • First episode	Clinical, but collect swab for NAAT	Aciclovir 400 mg tds, or valaciclovir (Valtrex) 500 mg bd for 5-10 days
• Recurrent disease	Best diagnosed by NAAT of swab Type-specific serology may be useful for managing couples	Aciclovir 400 mg tds, or valaciclovir 500 mg bd, or famciclovir (Famvir) 125 mg bd Suppressive therapy: aciclovir 400 bd, or valaciclovir 500 mg od, or famiciclovir 250 mg bd
HIV/AIDS	Serology	Patients require specialised care
Chancroid and donovanosis	Consider specialist referral	Patients require specialised care
Candidiasis	Clinical ± microscopy. Culture if non-albicans species suspected	An imidazole cream or pessaries for 3-6 days, or fluconazole (Diflucan) 150 mg po stat
Bacterial vaginosis	Clinical plus microscopy (see Figure 3)	Metronidazole or tinidazole (Fasigyn, Simplotan) 2 g po stat or metronidazole 400 mg bd for 5 days
Trichomoniasis	Microscopy ± culture	Metronidazole or tinidazole 2 g po stat

* Adapted from: National Management Guidelines for Sexually Transmissible Infections, Venereology Society of Victoria and Australasian Chapter of Sexual Health Medicine, 2002;[4] the Australasian Contact Tracing Manual, 2002 [available at: www.ashm.org.au];[5] and European and US guidelines.
Abbreviations: po = orally; stat = in one dose; bd = twice daily; IM = intramuscular; tds = three times daily; od = once daily.

Comment	Contact tracing priority
Patient self-collected urine specimens or vaginal or anal swabs are sensitive and may be more acceptable for the patient Ask laboratory to refer a positive chlamydia swab to a reference laboratory for genotyping	High
Uncomplicated infection at any site. Because of the high risk of concurrent chlamydia, many doctors would add azithromycin to regimen	High
Treat for 15 days for infection that may be >12 months old Treat weekly for 3 weeks for infection that may be >12 months old Use particularly if patient allergic to penicillin or averse to injections. Treat for 28 days for infection that may be >12 months old	High
The diagnosis is reinforced if a pathogen (*Chlamydia* or *Neisseria gonorrhoeae*) is detected. Reconsider diagnosis if response to treatment is poor after 4-5 days.	High
Use if lesions few or inaccessible to patient Self-applied; repeat cycles if warts are responding Use especially if warts are recurrent (but treatment is expensive and slow to work)	Low
2-3 days' treatment may be as good as 5 days' treatment Valaciclovir 500 mg bd may be needed if recurrences are very frequent	Low
	High
	High
Consider secondary prophylaxis if recurrences are very frequent	Nil
Longer course of treatment needed if recurrent	Nil
	Moderate (regular partners)

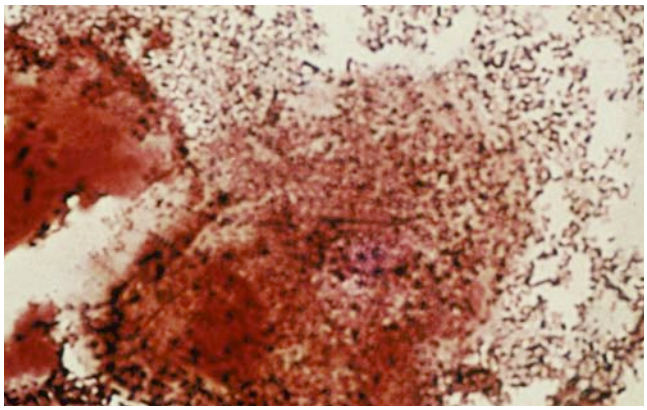

Figure 3. Clue cells of bacterial vaginosis. Numerous Gram-variable bacilli are covering a vaginal epithelial cell. Generally, lactobacilli or inflammatory cells are few in number or absent. No single organism has been implicated in this poorly understood but extremely common condition.

popular option.[1] The choice of treatment for warts will depend on issues such as number and site of warts, cost, patient tolerance and response to previous treatment regimens.

These are only guidelines. Patients in specific settings – for example, remote communities in central Australia – may require modified guidelines based on factors such as local antibiotic resistance patterns, logistics and cultural factors. Complicated infections and infections in immunocompromised or pregnant patients may require higher doses or longer courses of therapy. If in doubt, it may be wise to seek advice from a local sexual health or infectious disease physician. MT

References

1. Donovan B. Sexually transmissible infections other than HIV. Lancet 2004; 363: 545-556.
2. Donovan B, Bowden F. Sexually transmissible infections: what's new? Medicine Today 2005; 4(12): 51-53.
3. Grulich AE, de Visser RO, Smith AMA, Rissel CE, Richters J. Sex in Australia: sexually transmissible infection and blood-borne virus history in a representative sample of adults. Aust N Z J Public Health 2003; 27: 234-241.
4. Venereology Society of Victoria and Australasian Chapter of Sexual Health Medicine. National management guidelines for sexually transmissible infections. Melbourne: Venereology Society of Victoria, 2002.
5. Commonwealth Department of Health and Ageing. Australasian contact tracing manual. Sydney: Australasian Society for HIV Medicine, 2002 Available at: www.ashm.org.au (accessed 6 Jan 2006).
6. Denham I. Antiviral management of genital herpes. Medicine Today 2004; 5(7): 79-80.

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