Diagnosis and management of chlamydia: a guide for GPs

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Chlamydia is a common sexually-transmitted infection caused by Chlamydia trachomatis bacteria. This article discusses its diagnosis and treatment, and considers the GP’s role in management.

Chlamydia is the most common sexually-transmitted infection (STI) in the UK, with 203,116 new diagnoses in England in 2017, of which 126,828 (62%) were in young people aged 15–24 years. Chlamydia is transmitted primarily through penetrative sex and infects the urethra and endocervix. It can also infect the throat and the rectum, and in some cases the conjunctiva. It is very infectious, with a concordance of up to 75% between sexual partners. There are many risk factors for chlamydia infection, including being under the age of 25 years, having a new sexual partner and inconsistent use of condoms.

If a woman contracts chlamydia during pregnancy it can be transmitted to the baby at delivery, causing conjunctivitis or pneumonia.

Classification of chlamydia infections
There are three species of chlamydia bacteria that can cause disease in humans:
• Chlamydia psittaci – the natural host is birds, especially parrots, but it can be transmitted to humans, causing psittacosis
• Chlamydia pneumoniae – causes respiratory disease in humans
• Chlamydia trachomatis – several different serovars can cause disease (including STIs) in humans, as detailed in Figure 1.

Symptoms
The majority of genital chlamydia infections are asymptomatic, but they can cause significant symptoms. In women, chlamydia can cause vaginal discharge, dysuria, abdominal and pelvic pain, post-coital and intermenstrual bleeding, and deep dyspareunia. In men, chlamydia can cause dysuria, urethral irritation and urethral discharge. Rectal chlamydia is nearly always asymptomatic, but can be associated with anal discharge and discomfort. If a patient presents with proctitis then a diagnosis of lymphogranuloma venereum (LGV) should be considered.

Complications
Although an uncomplicated chlamydia infection that is treated promptly carries very little morbidity, if left untreated it can lead
to multiple complications. In women, it can lead to chronic pelvic pain, pelvic inflammatory disease (PID), ectopic pregnancy, tubal infertility and sexually acquired reactive arthritis (SARA). In men, it can lead to epididymo-orchitis and SARA. The cost of treating one episode of PID has been estimated to be around £163, which in London alone, with 7000 cases per year, would equate to more than £1 million a year.

**Diagnosis**

The gold-standard test for chlamydia is a nucleic acid amplification test (NAAT). Enzyme immunoassay (EIA) tests are rarely performed now, as they are not as sensitive or specific as NAAT.

Asymptomatic men should be offered a first-catch urine test and asymptomatic women should be offered a vulvo-vaginal self-swab. If women are symptomatic and having a speculum examination anyway, then a cervical swab can be done, but vulvo-vaginal self-swabs have been shown to be more sensitive, even in symptomatic women. It is important to remember that chlamydia can cause dysuria in both men and women, so that if a patient has a midstream specimen of urine (MSU) that shows ‘sterile pyuria’ then a chlamydia test should be considered.

Both rectal and throat swabs can be taken by the patient, and this can be offered for asymptomatic patients. A recent review found that rectal chlamydia in heterosexual women was common, in that 68.1% of those who had urogenital chlamydia also had rectal chlamydia, and this was not associated with reported anal intercourse.

Patients with proctitis should have an LGV test performed at the same time as their chlamydia test. This should be done at proctoscopy, and patients should ideally be seen in a genitourinary medicine (GUM) clinic. In addition, asymptomatic HIV-positive men who have sex with men (MSM) who have a positive chlamydia diagnosis should have a test for LGV, as they are more likely to have LGV than those who are HIV negative.

Anyone under 25 years old who is sexually active should have an annual chlamydia screen, along with a screen when changing sexual partners. Most local authorities also now offer online STI testing kits (see Box 1).

The UK’s National Chlamydia Screening Programme (NCSP) aims to increase early detection and control the transmission of chlamydia infection through opportunistic screening of young people (see Box 2).

**Differential diagnosis**

The differential diagnosis of conditions whose symptoms may resemble chlamydia is summarised in Table 1.

**Treatment options**

**First-line treatment**

For uncomplicated urogenital, throat and rectal infection, the recommended first-line treatment is doxycycline 100mg twice daily for 7 days.

Most local authorities now offer online STI-testing kits – these are self-swabs and/or urine pots, which are posted to the patient and then processed at a lab in the normal way. The results are then normally texted to the patient, with information as to where to attend for any treatment that might be indicated. This means that a patient could come to your surgery with a text message telling them that they have chlamydia.

In 2017, 10% of chlamydia tests in those aged 15–24 years were done via an online service. There have been concerns that those who do online tests will not attend for treatment, but a 2015 Cochrane review found that there was no difference between home-based and clinic-based specimen collections in the proportion of people who completed diagnosis and treatment.

**Box 1. Online sexually-transmitted infection (STI) testing**
Preventing the consequences of untreated infection

• Raise awareness and skills of health professionals to screen for chlamydia, and provide the information young adults need to reduce the risk of infection and transmission.

Preventing and controlling chlamydia through early detection and treatment of asymptomatic infection

• Prevent and control chlamydia through early detection and treatment of asymptomatic infection

The UK's National Chlamydia Screening Programme (NCSP) was set up in April 2003, and its aims are to:

Box 2. National Chlamydia Screening Programme
test is then positive, it is important to remember that, alongside the baby, the mother and her partner(s) will also need to be tested and treated.

**Conclusion**
Chlamydia is an infection that is easily missed, but also easily treated. Due to it being an STI there are additional aspects to consider with treatment, such as partner notification and repeat testing to ensure the infection has been eradicated, but all of these things can, and should, be done by GPs where appropriate.

**References**

**Declaration of interests**
None to declare.

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