بسم الله الرحمن الرحیم

دکتر زهراسادات ثقة الاسلامی
متخصص بیماریهای عفونی و گرمسیری
عضو تیم تخصصی مرکز ناباروری ابن سینا

Sexually transmitted Diseases

کلامیدیا تراکوماتیس
نایسریا گنوره
ترپونما پالیدوم
هموفیلوس دوکرئی
HSV
HPV
HIV
HBV
HCV

Chlamydia trachomatis& Neisseria gonorrhoeae

The vast majority of C. trachomatis infections reported to the CDC each year are genital infections.

C. trachomatis is the most common cause of bacterial sexually transmitted infection in the United States and the world .

Recent exposure to a new partner was much more strongly associated with gonorrhea than with chlamydial infection.

Most individuals infected with N. gonorrhoeae develop symptoms and seek care quickly, but many men and most women with C. trachomatis are either asymptomatic or minimally symptomatic and are only diagnosed as a result of screening.

Urogenital Infections in Men

Urethritis

The incubation period for symptomatic chlamydial urethritis is longer, taking 7 to 14 days compared with 4 days for gonococcal urethritis. Both infections present with dysuria, but the urethral discharge with chlamydial urethritis is usually white, gray, or sometimes clear, in contrast to the more purulent discharge observed with gonococcal urethritis.

The discharge of NGU may be so slight as to be demonstrable only after penile “stripping” or “milking” and only in the morning. Some patients may deny the presence of discharge but may note stained underwear in the morning resulting from scant discharge overnight.

Epididymitis and Prostatitis

C. trachomatis and N. gonorrhoeae are the most frequent causes of epididymitis in men younger than 35 years, whereas Enterobacteriaceae (primarily Escherichia coli) are the usual pathogens in men older than 35 years.

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Urogenital Infections in Women

Most women with C. trachomatis genital infection are asymptomatic.

Young age is the single factor most strongly associated with increased risk of chlamydial infection and N. gonorrhoeae .

young age is associated with an increased risk of repeated infection and with an associated increased risk of PID, ectopic pregnancy, and infertility.

Oral contraceptives may increase susceptibility or enhance detection because of increased cervical ectopy, resulting in more exposure of susceptible endocervical cells. Alternatively, oral contraceptive use may be a surrogate marker for increased sexual activity.

Cervicitis and Urethritis

approximately 70% of women with endocervical infection are asymptomatic or have mild symptoms such as vaginal discharge, bleeding, mild abdominal pain, or dysuria.

Vaginal discharge is likely due to endocervical rather than vaginal infection because C. trachomatis cannot infect the squamous epithelium of the adult vagina. vaginitis can be present in girls because the vagina is lined with transitional cell epithelium before puberty

C. trachomatis has been proposed as a potential cofactor for human papillomavirus (HPV) in the development of cervical cancer.

This association has only been noted with cervical squamous cell carcinoma and not cervical adenocarcinoma

C. trachomatis and other sexually transmitted agents that produce genital mucosal inflammation cause increase shedding of HIV in genital secretions.

Infertility and Ectopic Pregnancy

The long-term consequences of both acute PID and silent, subclinical disease are tubal infertility, ectopic pregnancy, and chronic pelvic pain syndrome. The general mechanisms responsible for tubal occlusion are not understood, but Chlamydia is believed to induce chronic inflammation, scarring, and eventual blockage of the fallopian tubes from repeated or prolonged infection

Pregnancy Complications

C. trachomatis & N. gonorrhoeae infections affect pregnancy outcome.

In one study, women experiencing recurrent spontaneous abortions had high titers of antichlamydial IgG but negative endocervical cultures for C. trachomatis, suggesting an association between prior or chronic C. trachomatis infection and spontaneous abortion.

Some women with recent C. trachomatis infection had infants with lower birth weight compared with women lacking Chlamydia-specific IgM An association between chlamydial infection and prematurity

and premature rupture of membranes has been reported

- Gonorrhea during pregnancy is associated with spontaneous abortion,premature labor, early rupture of fetal membranes, and perinatal infant mortality.

Prevention

Sex partners of infected people should be treated presumptively, regardless of diagnostic test results

Because of the asymptomatic nature of most infections, routine screening of young women(≤25 years) and pregnant women is recommended.

Condoms are very effective in preventing transmission

Human papilloma virus (HPV)

Papillomaviridae family

Association between HPV and malignant Dis.

.HPV types called high risk oncogenic

16,18,31,33,35,39,45,51,52,53,56,58,59,66

HPV 16……SCC

HPV 18……adenocarcinoma

The temporal association between HPV and cervical premalignant lesions has proven to be useful for prevention strategies.

Risk factors:

.The number of sexual partners

.The age of first sexual intercourse

.The sexual behavior of the husband

A direct association is found between viral load and the risk of cancer

Prevention and Vaccination

.Avoiding contact with infectious lesions

.male condom use

.pap smear

.Viral markers

.partner services

Vaccine

Papilogard

Gardasil

Gardasil 9

HSV

Herpes simplex virus type1 and 2(HSV 1,2)

recurrent oral and genital ulcers

Subclinical or asymptomatic shedding of HSV in oral and genital secretions is a hallmark of infection

Hsv infection in pregnancy

Spontaneous abortion,prematurity,fetal growth restriction…

Neonatal herpes:90% perinatally,5-8%congenital,postnatally

Diagnosis

Clinial criteria

Tissue culture

Serologic assays(Western blot:distinguishing HSV1 specific and HSV2specific antibodies)

PCR

syphilis(Treponema pallidum)

Syphilis is a chronic, multistage sexually transmitted disease caused by the spirochete

Treponema pallidum

Epidemiology

• According to the World Health Organization,11 million new cases of venereal syphilis occur globally each year.

• Globally, 1.5 million pregnant women are estimated to be infected each year; approximately one third of these infections will result in stillbirths or other adverse outcomes of pregnancy.

• In developing countries, transmission is largely heterosexual, while transmission among men who have sex with men predominates in industrialized nations.

CLINICAL MANIFESTATIONS

Primary Syphilis

Syphilis commences clinically when spirochetes replicating at the site of inoculation induce a local inflammatory response sufficient to generate a macule, which over the course of 1 to 2 weeks, becomes papular and then ulcerates, producing the defining lesion of primary syphilis,the chancre.

In most patients, a painless regional lymphadenopathy develops 1 to 2 weeks after the appearance of the Chancre.

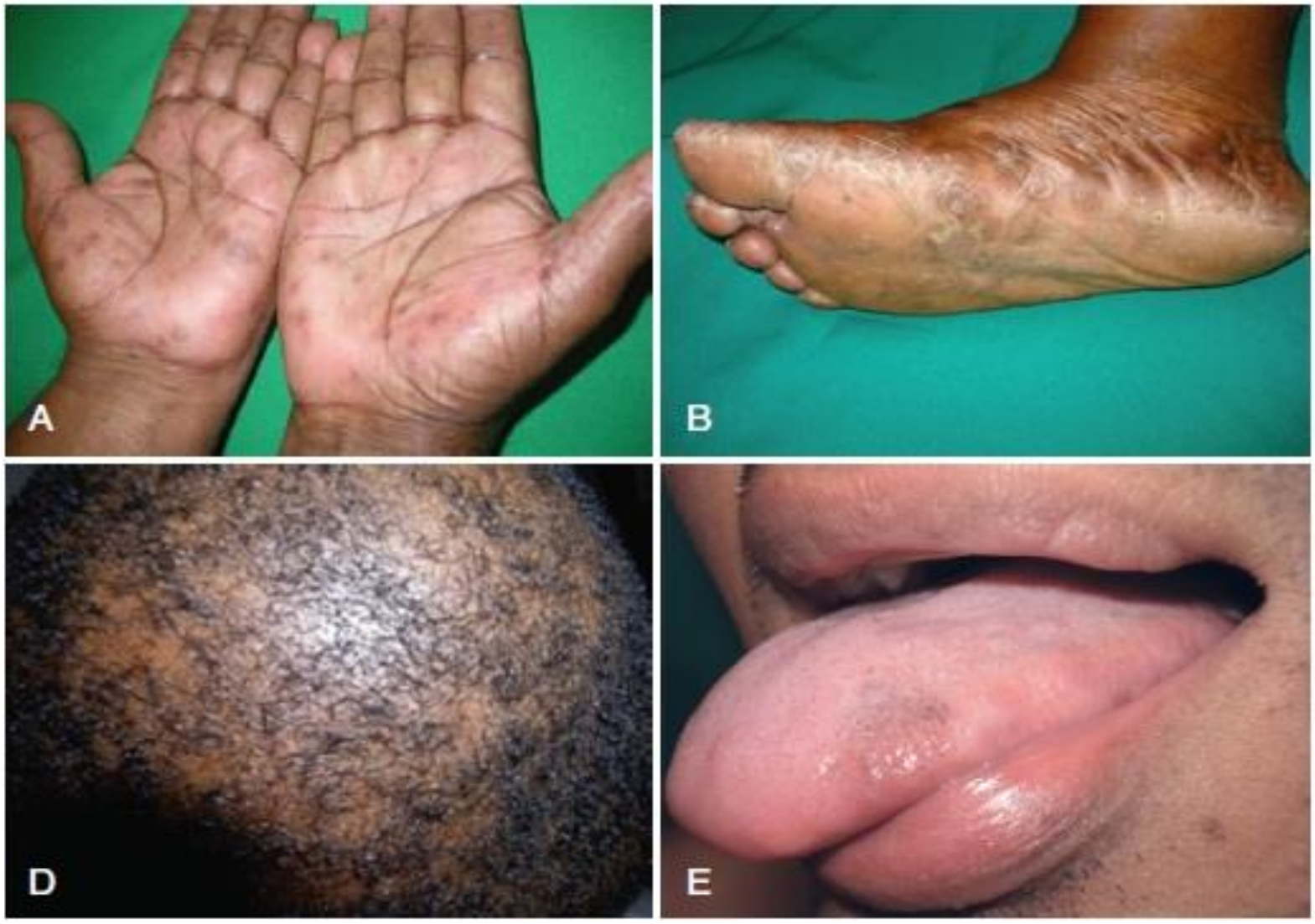
The fact that this ulcer heals spontaneously within 2 months gives the patient a false sense of relief.

Secondary Syphilis

In this stage, patients typically experience a flulike syndrome with sore throat,headache, fever, myalgias (muscle aches), anorexia, lymphadenopathy (swollen lymph nodes), and a generalized mucocutaneous rash.The rash can be variable (macular, papular, pustular) and cover the entire skin surface (including the palms and soles). Raised lesions called **condylomata lata** may occur in moist skinfolds, and erosions may develop in the mouth and on other mucosal surfaces.

As with the primary chancre, these lesions are highly infectious.

The rash and symptoms resolve spontaneously within a few weeks,and patients may undergo spontaneous remission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Latent Syphilis

Latent syphilis is by definition the stage during which serologic tests are reactive without clinical manifestations. Importantly, the term does not mean that the disease process is quiescent, only that clinical signs and symptoms are not evident.

Tertiary Syphilis

Tertiary syphilis is a (usually) slowly progressive, destructive inflammatory process that can affect any organ in the body to produce clinical illness 5 to 30 or more years after the initial infection.

It is generally subdivided into neurosyphilis, cardiovascular syphilis, and gummatous syphilis.

congenital syphilis

In utero infection can lead to serious fetal disease, resulting in latent infections, multiorgan malformations, or death of the fetus. Most infected infants are born without clinical evidence of the disease, but rhinitis then develops and is followed by a widespread desquamating maculopapular rash.

Teeth and bone malformation,blindness, deafness, and cardiovascular syphilis are common in untreated infants who survive the initial phase of disease

Antibody Detection

The nontreponemal tests are used as screening tests because they are rapid to perform and inexpensive. Positive reactivity with one of these tests is confirmed with a treponemal test. **(fluorescent treponemal antibody–absorption (FTA-ABS)) test Nontreponemal tests: Venereal Disease Research Laboratory (VDRL) test** and the **rapid plasma reagin (RPR) test**

The treponemal test results can be positive before the nontreponemal test results become positive in early syphilis, and they can remain positive when the nonspecific test results revert to negative

VDRL and RPR can be used to monitor the effectiveness of therapy

Therapy

Penicillin is the drug of choice for treating *T. pallidum* infections.A single intramuscular dose of long-acting benzathine **penicillin G** is used for the early stages of syphilis, and three doses at weekly intervals is recommended for congenital and late syphilis. **Doxycycline** or **azithromycin** can be used as alternative antibiotics for patients allergic to penicillin.

Haemophilus ducreyi

Chancroid

Gram-negative coccobacillus

Clinical Manifestations

The hallmark of chancroid is genital ulceration. The lesion often begins as a papule and evolves into an ulcer. Typical ulcers are painful, well circumscribed with ragged edges, and not indurated. The base of the ulcer is covered with necrotic material and bleeds easily when scraped. Approximately half of patients with chancroid have inguinal lymphadenopathy.

These lymph nodes sometimes become fluctuant and rupture spontaneously.

Chancroid can present in atypical ways. Multiple ulcers may coalesce to form a giant ulcer. Ulceration may resolve before the appearance of inguinal adenopathy and suppuration, resulting in presentation as suppurative inguinal adenitis in the absence of an active genital ulcer.

Therapy

The recommendation by the CDC is a single 1-g dose of azithromycin orally. Alternative regimens include ceftriaxone (250 mg IM in a single dose), ciprofloxacin (500 mg PO twice daily for 3 days), or erythromycin base (500 mg PO three times daily for 7 days).

Contacts of patients with chancroid should be identified and treated if they had sexual contact with the patient during the 10 days before

the onset of symptoms in the patient, even in the absence of clinical symptoms in the contact

THE END