SEXUALLY TRANSMITTED INFECTIONS

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Introduction

Sexually transmitted infections (STIs) have afflicted humankind throughout history and continue to do so despite vigorous efforts in prevention and patient education.
Anorectal syphilis, gonorrhea, HPV (ano-genital warts), and Chlamydia (including lymphogranuloma venereum or LGV) have been recognized as sexually transmitted for many years, while infections as shigellosis, salmonellosis, hepatitis A and B, giardiasis, and amebiasis have not been considered transmitted through sex until recently. All of these infections , as well as the syndrome of enteritis and proctitis became very common among gay males in 1970s and early 1980s. Their incidence decreased in the AIDS era, probably due to changing sexual practices and increased use of condoms. However, in the late 1990s rectal bacterial STIs increased among men who have sex with men (MSM) in many cities in the United States and Europe. Transmission of these pathogens is facilitated by exposure to multiple sexual partners, by specific sexual practices (especially anal intercourse and anilingus, fisting)

What are STIs?

STDs are infections of ano-genital area caused by various pathogens that entry in human body throught sexual intercourses with infected partners. Also sex toys could transmit these infections.

Herpes

Herpes is the most common cause of ano-genital ulcer. Causal agents are *herpes simplex virus-1 (HSV-1) and herpes simplex virus-2 (HSV-2)*, but the majority of anogenital infections are secondary to HSV-2. This pathogen may be responsible for perianal and genital ulceration as well as proctitis.
Herpes is the most common viral coinfection in HIV patients. The incubation period is approximately 2 to 12 days. Infection is usually lifelong. Reactivation and shedding of virus is increased in patients with decreased immune status.
Genital herpes present as a painful skin vesicles that could coalesce and ulcerate. Clinical diagnosis should be confirmed with laboratory tests.
Short antiviral treatment is available and is directed toward controlling the symptoms of active episodes; suppressive therapy for recurrences is also available: in these cases doctor's advice is needed to choose the best treatment option for you.

Gonorrhea

It is determined by the infection of *Neisseria gonorrhea*. Patients report a mucopurulent discharge, tenesmus and rectal pain. On anoscopy a gentle pressure on the crypts will produce a classic purulent discharge. Gram stain of rectal exudates may identify the gonorrhoea as long with culture..
Treatment is based on the use of antibiotic therapy according local guidelines. It is important to remind that in many cases asymptomatic Chlamydia infection is associated to gonorrea so that a double antibiotic treatment should be warrented .

Syphilis
It is caused by *Treponema pallidum.* Three stages of the infection are recognized: 1) Primary syphilis: a painful or painless ulcer is present in the site of the infection. Patients with atypical anal fissures should be evaluated for syphilis. 2) Secondary syphilis: a maculopapular rash of the trunk and extremities associated to lymphadenopathy, and flat condyloma in the anus are present. 3) Tertiary syphilis: neurologic or cardiac symptoms are present.
Diagnosis is based on detailed sexual history and serological tests. The treatment of primary and secondary syphilis is based on antibiotic therapy with benzathine penicillin G which is very effective. Notification to the partners met in the prior 3-12 months is mandatory and remember safer sex practices which are highly effective in controlling the spread of infection.

Chlamydia
Chlamydia trachomatis is a bacterium that may cause proctitis, characterized by bloody, mucopurulent discharge, tenesmus, and anal pain. Generally is associated an inguinal lymphadenopathy. Some cases are asymptomatic. A proctoscopy is mandatory and reveal a friable, bleeding and edematous mucosa. Diagnosis is confirmed by specific tests only available at qualified laboratories . Treatment consist of the use of antibiotics; notification to the partners met in the prior 3 months is recommended and remember safer sex practices which are highly effective in controlling the spread of infection

Lymphogranuloma venereum
Chlamydia trachomatis serovars L1, L2 or L3 is the causative agent. Once considered a rare infection in industrialized countries, an outbreak among Men who have sex with Men (MSM) in 2003 in Rotterdam, followed by reports from other countries, signaled its re-emergence. The initial presentation is an anal ulceration at the site of inoculation. In later stages a serious proctitis called “anorectal syndrome” could develop. A painful inguinal lymphadenopathy, known as buboes, is generally associated. Proctoscopy is useful in the diagnosis that is confirmed by specific tests only available at highly qualified laboratories. Sometimes endoscopically and histologically it is indistinguishable from IBD (Ulcerative colitis and Crohn’s disease). Partner notification, including sexual contacts in the 60 days prior to diagnosis, is essential. The treatment of choice consists of antibiotics.

Anogenital warts
Anogenital warts are caused by the infection of the human papillomavirus (HPV). The major part of cases are caused by types 6 and 11 which have a benign course; some angenital lesions are related to the infection with more aggressive types that are strongly associated with preneoplastic anal lesions and with anal and cervical neoplasia. HPV is a multifocal infection of the anogenital skin producing single or multiple exophytic lesions. Diagnosis is based on clinical examination. Anoscopy is mandatory to exclude endoanal lesions. A gynaecological exam could exclude concomitant genital lesions. The goal of the treatment is the eradication of the lesions in order to avoid the possible degeneration of them or the increase in number or size. Many treatments have been proposed. They reduce, but don’t eliminate HPV infection. The modality of treatment depends on the morphology, number and distribution of warts. Small, soft nonkeratinized warts could be treated as “home therapy” with podofilox gel and imiquimod 5% cream. Office/clinic treatments, in particular for keratinized lesions include trichloroacetic acid, physical ablation such as cryotherapy, excision or electrocautery. Laser excision and intralesion interferon are also rarely used. Recurrences are high (up to 30%). After surgical excision, that is the most effective treatment histological exam is mandatory to exclude degeneration. In this case a close follow up with high resolution anoscopy is indicated, mainly in HIV+ patients.
The use of condom reduce but it is not sufficient to eliminate the risk of infection.

Chancroid
The causative organism of chancroid is *Haemophilus ducreyi.* It is characterized by painful genital ulcer and inguinal lymphadenopathy. Diagnosis is often based on clinical grounds; specific tests are available only at specialized laboratory. Treatment consists of antibiotics and larger ulcers may heal only after 2 weeks. A prolonged treatment is not required in these cases.

Granuloma inguinale (also called Donovanosis)
It is determined by the infection of *Klebsiella granulomatis.*The disease is endemic in developing countries. Typical lesions are painless and beefy ulcerations without inguinal lymphadenopathy. The treatment of choice is the use of antibiotics.

HIV
HIV infection could be associated with painful perianal ulcers. These could enlarge and seem atypical anal fissures proximal to the dentate line. The best therapy is highly active antiretroviral therapy (HAART).

Proctocolitis and Enteritis
The organisms responsible for proctocolitis tend to be transmitted by fecal-oral route, most commonly as food and waterborne illness, but they can also be spread directly by the oral-anal route. Etiologic agents could be *Shigella, Campylobacter, Entamoeba histolytica, Salmonella and Citomegalovirus*. Symptoms are diarrhea, abdominal pain and hematochezia.
Diagnosis is based on clinical exam, proctoscopy, biopsies and stool cultures.
Antibiotics are the treatment of choice.
Enteritis are caused by *Giardia lamblia and Cryptosporidium* and are carachterized by large volume watery diarrhea and abdominal pain. Stool cultures are mandatory foe a correct diagnosis. Also in these cases antibiotics are indicated.

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