Sexually Transmitted Disease - STD's

A **sexually transmitted disease (STD)** is an illness caused by an infectious pathogen that has a significant probability of transmission between humans by means of sexual contact, including vaginal intercourse, oral sex, and anal sex. Increasingly, the term sexually transmitted infection (STI) is used, as it has a broader range of meaning; a person may be infected, and may potentially infect others, without showing signs of disease. In addition, "disease" seems to have much more of a negative connotation than "infection." Some STIs can also be transmitted via the needles used in IV drug use, as well as through childbirth or breastfeeding. Sexually transmitted diseases have been well-known for hundreds of years.

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Classification and terminology

Until the 1990s, such afflictions were commonly known as venereal diseases: Veneris is the Latin genitive (possessive) from of the name Venus, the Roman goddess of love. Social disease was another euphemism. Public health officials originally introduced the term sexually transmitted disease, which clinicians are increasingly using alongside the term sexually transmitted infection in order to distinguish it from the former. According to http://www.etharc.org:"Sometimes the terms STI and STD are used interchangeably. This can be confusing and not always accurate, so it helps first to understand the difference between infection and disease. Infection simply means that a germ – virus, bacteria, or parasite – that can cause disease or sickness is present inside a person's body. An infected person does not necessarily have any symptoms or signs that the virus or bacteria is actually hurting his or her body (they do not necessarily feel sick). A disease means that the infection is actually causing the infected person to feel sick, or to notice something is wrong. For this reason, the term STI – which refers to infection with any germ that can cause an STD, even if the infected person has no symptoms – is a much broader term than STD."
The distinction being made, however, is closer to that between a colonization and an infection, rather than between an infection and a disease.

Specifically, the term STD refers only to infections that are causing symptoms. Because most of the time people do not know that they are infected with an STD until they start showing symptoms of disease, most people use the term STD, even though the term STI is also appropriate in many cases.

Moreover, the term sexually transmissible disease is sometimes used since it is less restrictive in consideration of other factors or means of transmission. For instance, meningitis is transmissible by means of sexual contact but is not labeled as an STI because sexual contact is not the primary vector for the pathogens that cause meningitis. This discrepancy is addressed by the probability of infection by means other than sexual contact. In general, an STI is an infection that has a negligible probability of transmission by means other than sexual contact, but has a realistic means of transmission by sexual contact (more sophisticated means—blood transfusion, sharing of hypodermic needles—are not taken into account). Thus, one may presume that, if a person is infected with an STI (e.g., chlamydia, gonorrhea, genital herpes), it was transmitted to him/her by means of sexual contact.

The English language has short words for two of the most common: the "pox" (syphilis) and "the clap" (gonorrhea).

Pathology

Many STIs are (more easily) transmitted through the mucous membranes of the penis, vulva, and (less often) the mouth. The visible membrane covering the head of the penis is a mucous membrane, though it produces no mucus (similar to the lips of the mouth). Mucous membranes differ from skin in that they allow certain pathogens into the body.

This is one reason that the probability of transmitting many infections is far higher from sex than by more casual means of transmission, such as non-sexual contact—touching, hugging, shaking hands—but it is not the only reason. Although mucous membranes exist in the mouth as in the genitals, many STIs seem to be easier to transmit through oral sex than through deep kissing. According to this chart , many infections that are easily transmitted from the mouth to the genitals or from the genitals to the mouth, are much harder to transmit from one mouth to another. With HIV, genital fluids happen to contain much more of the pathogen than saliva. Some infections labeled as STIs can be transmitted by direct skin contact. Herpes simplex and HPV are both examples. KSHV, on the other hand, may be transmitted by deep-kissing but also when saliva is used as a sexual lubricant, which is common among gay men engaging in anal intercourse.

Depending on the STD, a person may still be able to spread the infection if no signs of disease are present. For example, a person is much more likely to spread herpes infection when blisters are present (STD) than when they are absent (STI). However, a person can spread HIV infection (STI) at any time, even if he/she has not developed symptoms of AIDS (STD).

All sexual behaviors that involve contact with another person or the bodily fluids of another person should be considered to contain some risk of transmission of sexually transmitted diseases. Most attention has focused on controlling HIV, which causes AIDS, but each STD presents a different situation.

As may be noted from the name, sexually transmitted diseases are transmitted from one person to another by certain sexual activities rather than being actually caused by those sexual activities. Bacteria, fungi, protozoa or viruses are still the causative agents. It is not possible to catch any sexually transmitted disease from a sexual activity with a person who is not carrying a disease; conversely, a person who has an STD got it from contact (sexual or otherwise) with someone who had it, or his/her bodily fluids. Some STDs such as HIV can be transmitted from mother to child either during pregnancy or breastfeeding.

Although the likelihood of transmitting various diseases by various sexual activities varies a great deal, in general, all sexual activities between two (or more) people should be considered as being a two-way route for the transmission of STDs (i.e. "giving" or "receiving" are both risky).

Healthcare professionals suggest safer sex, such as the use of condoms, as the most reliable way of decreasing the risk of contracting sexually transmitted diseases during sexual activity, but safer sex should by no means be considered an absolute safeguard. The transfer of and exposure to bodily fluids, such as blood transfusions and other blood products, sharing injection needles, needle-stick injuries (when medical staff are inadvertently jabbed or pricked with needles during medical procedures), sharing tattoo needles, and childbirth are other avenues of transmission. These different means put certain groups, such as doctors, haemophiliacs and drug users, particularly at risk.

Recent epidemiological studies have investigated the networks that are defined by sexual relationships between individuals, and discovered that the properties of sexual networks are crucial to the spread of sexually transmitted diseases. In particular, assortative mixing between people with large numbers of sexual partners seems to be an important factor.

It is possible to be an asymptomatic carrier of sexually transmitted diseases. In particular, sexually transmitted diseases in women often cause the serious condition of pelvic inflammatory disease.

Prevalence

STD incidence rates remain high in most of the world, despite diagnostic and therapeutic advances that can rapidly render patients with many STDs noninfectious and cure most. In many cultures, changing sexual mores and oral contraceptive use have eliminated traditional sexual restraints, especially for women, and both physicians and patients have difficulty dealing openly and candidly with sexual issues. Funding to control STDs is almost uniformly inadequate. Additionally, worldwide dissemination of drug-resistant bacteria (eg, penicillin-resistant gonococci) reflects misuse of antibiotics and spread of resistant clones by mobile populations. The effect of travel is most dramatically illustrated by the rapid spread of the AIDS virus (HIV-1) from Africa to

Europe and the Americas in the late 1970s.

Commonly reported prevalences of STIs among sexually active adolescent girls both with and without lower genital tract symptoms include chlamydia trachomatis (10 to 25%), Neisseria gonorrhoeae (3 to 18%), syphilis (0 to 3%), Trichomonas vaginalis (8 to 16%), and herpes simplex virus (2 to 12%). Among adolescent boys with no symptoms of urethritis, isolation rates include C. trachomatis (9 to 11%) and N. gonorrhoeae (2 to 3%).

As early as 1996, WHO estimated that more than 1 million people were being infected daily. About 60% of these infections occur in young people < 25 years of age, and 30% of this age group is < 20 years. Between the ages of 14 and 19, STDs occur more frequently in girls than boys by a ratio of nearly 2:1; this equalizes by age 20.

The most effective way to prevent sexual transmission of STIs is to avoid sexual activity with an infected partner. Ideally, both new partners should get tested for STIs before initiating sexual activity. If a person chooses to have sexual activity with a partner whose infection status is unknown or who is infected with HIV or another STI, a new condom should be used for each act of intercourse. Condom use is not completely protective against acquisition of STI because of the presence of pathogen outside the protected skin or condom breakage. Condoms do not offer complete protection against herpes and genital warts, which are commonly found outside of areas covered by condoms.

Treatment

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Prior to the invention of modern medicines, sexually transmitted diseases were generally incurable, and treatment was limited to treating the symptoms of the disease. The first voluntary hospital for venereal diseases was founded in 1746 at London Lock Hospital.

The first effective treatment for a sexually transmitted disease was salvarsan, a treatment for syphilis. With the discovery of antibiotics, a large number of sexually transmitted diseases became easily curable, and this, combined with effective public health campaigns against STDs, led to a public perception during the 1960s and 1970s that they have ceased to be a serious medical threat.

During this period, the importance of contact tracing in treating STIs was recognized. By tracing the sexual partners of infected individuals, testing them for infection, treating the infected and tracing their contacts in turn, STI clinics could be very effective at suppressing infections in the general population.

In the 1980s, first genital herpes and then AIDS emerged into the public consciousness as sexually transmitted diseases that could not be cured by modern medicine. AIDS in particular has a long asymptomatic period – during which time HIV (the human immunodeficiency virus, which causes AIDS) can replicate and the disease can be transmitted to others – followed by a symptomatic period, which leads rapidly to death unless treated. Recognition that AIDS threatened a global pandemic led to public information campaigns and the development of treatments that allow AIDS to be managed by suppressing the replication of HIV for as long as possible. Contact tracing continues to be an important measure, even when diseases are incurable, as it helps to contain infection.

Current STD Treatment (Cure)

Types and their pathogenic causes

Most of the diseases on this list are most commonly transmitted sexually. Some are commonly transmitted in other ways as well; for example, HIV/AIDS is also commonly transmitted through the sharing of infected needles by drug users, while SARS, which can be spread through casual contact such as coughing and sneezing, is very often not associated with sexual activity.

Bacterial

* Chancroid (Haemophilus ducreyi)
* Chlamydia infection (Chlamydia trachomatis)
* Donovanosis (Granuloma inguinale or Calymmatobacterium granulomatis)
* Gonorrhea (Neisseria gonorrhoeae)
* Lymphogranuloma venereum (LGV) (Chlamydia trachomatis serotypes L1, L2, L3. See Chlamydia)
* Non-gonococcal urethritis (NGU) (Ureaplasma urealyticum or Mycoplasma hominis)
* Syphilis (Treponema pallidum)

Fungal

* Crotchrot
* Yeast Infection

Viral

* Hepatitis B.
(Note: Hepatitis A and Hepatitis E are transmitted via the fæcal-oral route, not sexually; Hepatitis C is rarely sexually transmittable,and the route of transmission of Hepatitis D is uncertain, but may include sexual transmission.)

* Herpes simplex
o Herpes simplex virus (HSV)
* Human Immunodeficiency Virus (HIV/AIDS)
* Human papillomavirus (HPV)
o Certain strains of HPV cause genital warts
o Certain strains of HPV cause cervical dysplasias which can lead to cervical cancer/anal cancer
* Molluscum (MC)
* Kaposi's sarcoma-associated herpesvirus (KSHV/HHV8)
o The cause of Kaposi's sarcoma
* Alicianious X Kaustic
o Aliciia X Kaustic (AXK)

Parasites

* Pubic lice, colloquially known as "crabs" (Phthirius pubis)
* Scabies (Sarcoptes scabiei)

Protozoal

* Trichomoniasis (Trichomonas vaginalis)

Sexually transmitted enteric Infections

Various bacterial (Shigella, Campylobacter, or Salmonella), viral (hepatitis A), or parasitic (Giardia or ameba) pathogens are transmitted by sexual practices that promote anal-oral contamination. Although the bacterial pathogens may coexist with or cause proctitis, they usually produce symptoms (diarrhoea, fever, bloating, nausea, and abdominal pain) suggesting disease more proximal in the GI tract.