

## INTRODUCTION

G. Carosi, E. Nunzi, A. Matteelli and P. Fiallo

The term venereal diseases was initially used to identify, mainly for classification, five infections, which were classically known to be transmitted from person to person through sexual intercourse: syphilis, gonorrhoea, chancroid, lymphogranuloma venereum and granuloma inguinale. The recognition of the increasing number of infections and conditions that are sexually transmitted has led to the introduction of new terminologies. The term Sexually Transmitted Diseases (STD) was first introduced and widely accepted. More recently the term Sexually Transmitted Infections (STI) has been introduced to underline the fact that many of the agents responsible for STD are of public health concern even when the disease does not manifest. In fact, HPV, HSV and the HIV pathogen may persist silently in the host before overt disease or complications occur. The term Reproductive Tract Infection (RTI) is preferred by those working in reproductive health to include conditions like bacterial vaginosis or candidiasis, for which sexual transmission is not recognised as an important route of diffusion. Moreover, this last term has the important advantage of being destigmatising as it avoids any reference to sexuality.

There are presently more than 25 agents responsible for STI (Table 1), which can be grouped as follows: those for which a sexual contact is the predominant route of transmission, those for which sexual transmission is debated or of little importance, and pathogens transmitted by oral-faecal exposure, frequently reported in homosexuals.

<b>Table 1: Transmitted in adults predominantly by sexual intercourse</b>		
<b>Bacteria</b>	<b>Viruses</b>	<b>Other</b>
<ul style="list-style-type: none"> <li>✓ Neisseria gonorrhoea</li> <li>✓ Chlamydia trachomatis</li> <li>✓ Calymmatobacterium granulomatis</li> <li>✓ Ureaplasma urealyticum</li> </ul>	<ul style="list-style-type: none"> <li>✓ Human Immuno-deficiency Virus 1 and 2</li> <li>✓ Human T lymphotropic virus</li> <li>✓ Herpes Simplex virus 2</li> <li>✓ Human papillomavirus</li>   <li>✓ Hepatitis B virus</li> <li>✓ Cytomegalovirus</li> <li>✓ Molluscum contagiosum virus</li> </ul>	<ul style="list-style-type: none"> <li>✓ Trichomonas Vaginitis</li> <li>✓ Phtirius pubis</li> </ul>
<b>Sexual transmission described but not well defined or not the predominant mode</b>		
<b>Bacteria</b>	<b>Viruses</b>	<b>Other</b>
<ul style="list-style-type: none"> <li>• Mycoplasma hominis</li> <li>• Gardnerella vaginalis and other vaginal bacteria</li> <li>• Group B streptococcus</li> </ul>	<ul style="list-style-type: none"> <li>• Human T lymphotropic Virus 2</li> <li>• Hepatitis C virus</li> <li>• Herpes Simplex virus 1</li> <li>• Human Herpes virus type 8</li> </ul>	<ul style="list-style-type: none"> <li>• Candida albicans</li> <li>• Sarcoptes scabiei</li> </ul>
<b>Transmitted by sexual contact involving oral-faecal exposure</b>		
<ul style="list-style-type: none"> <li>• Shigella spp</li> <li>• Campylobacter spp</li> </ul>	<ul style="list-style-type: none"> <li>• Hepatitis C virus</li> </ul>	<ul style="list-style-type: none"> <li>• Entamoeba histolytica</li> <li>• Giardia lamblia</li> </ul>

STD agents can produce a variety of clinical symptoms, which can be grouped into STD syndromes (Table 2). The recognition of these STD syndromes is extensively described in specific chapters of this book, is of practical importance for management of individual cases.

<b>Syndrome</b>	<b>STD Agent (s)</b>
Urethritis (male)	<i>N. gonorrhoea</i> , <i>C. trachomatis</i> , <i>U. urealyticum</i> , <i>T. vaginalis</i> , HIV
Epididymitis	<i>N. gonorrhoea</i> , <i>C. trachomatis</i> , <i>T. vaginalis</i>
Mucopurulent cervicitis	<i>N. gonorrhoea</i> , <i>C. trachomatis</i>
Vulvovaginitis/vaginosis	<i>C. albicans</i> , <i>T. vaginalis</i> , Anaerobes
Pelvic Inflammatory Diseases	HSV 1-2, <i>T. pallidum</i> , <i>H. duereyi</i> , <i>C. trachomatis</i> (LGV strain), <i>C. granulomatis</i>
Genital and anal warts	Human Papillomavirus

Having recognised that the list of STD pathogens and syndromes is continuously expanding, an important issue remains to be cleared. What is the importance, and what are the practical implications, of recognising that an agent is a STD (or STI – RTI) pathogen? The importance is two-folds as all STD pathogens share two common features: the mechanisms of transmission and the method of control. The number of secondary cases originating from one patient affected with STD is determined by the product of three factors: the number of sexual partners, the probability of transmission during a single sexual contact, and the period of infectiousness. As a consequence, any intervention for control will have to consider actions to reduce the chances of exposure (ex: fewer sex partners), to reduce the efficiency of transmission (ex. Condom use) and to shorten the duration of infectivity (ex: early diagnosis and treatment). These actions will be effective on all STDs at the same time. Actions will also have to be targeted at the same time, both at individual and population levels.

Without doubt, STD control does represent a health priority in most developing countries. Each year, the incidence of new bacterial STDs in the world exceeds 300 millions, while the prevalence of active or latent infection with the common chronic viral STDs as genital Herpes Simplex, Human Papillomavirus, Hepatitis B. Virus, and increasingly, the Human Immunodeficiency Virus is estimated in billions of cases. STDs may be associated with a significant morbidity and mortality, as a result of complications and sequelae following infection. A disproportionate burden is carried by female gender. Complications in women include cervical cancer, pelvic inflammatory disease with resulting infertility, chronic pain and ectopic pregnancy and childbirth. As both the incidence of STD and the number of pregnancies are increasing worldwide, an increasing burden of neonatal infectious morbidity is expected. Finally a causal link between HIV transmission and STDs has been demonstrated. The explosive spread of HIV in areas where STD are highly endemic is due to the amplifying effect that they exert on both the infectiousness of the index HIV infected case, and the susceptibility of the partner. Based on this understanding, STD control is considered a cornerstone of HIV prevention programmes worldwide.

This book is intended to provide a practical and updated bench tool for both health managers and service providers at peripheral level. It is part of those initiatives mounted to face the every day increasing challenge of STDs, particularly in the Southern and Eastern part of the world.