Leading article

Sexually transmitted diseases

S. Samarakoon [1]

Journal of the College of Community Physicians of Sri Lanka 1998; 3:9-12

Sexually transmitted diseases (STDs), as the term implies, are a group of contagious diseases whose principal mode of transmission is via unprotected sexual intercourse with an infected person.

Worldwide STDs have become a major health problem as a result of their high prevalence of symptomatic and asymptomatic infections combined with their potential for serious complications. In addition, it is important to recognize the impact STDs have on: maternal and child health and the social and economic consequences including increased health expenditure and reduction in the productivity of men and women in the prime of their life. The human immune deficiency infection has added a grave danger to the existing problem. A number of STDs has been identified as facilitating the spread of human immunodeficiency virus (HIV) (1).

The spectrum of STDs has widened over the last two decades from the classical syphilis, gonorrhoea and chancroid to include many other diseases caused by bacterial, viral, fungal and protozoan agents (2). World Health Organisation (WHO) estimated that in 1995 around 333 million new curable STD infections occurred throughout the world (3). The commonest infections reported by STD clinics in Sri Lanka today are herpes genitalis, syphilis, non-gonococcal urethritis, genital warts and gonorrhoea (4). Infections such as bacterial vaginosis and candidiasis are encountered in STD clinics, which may be transmitted sexually although not exclusively.

[1] Consultant Venereologist, National STD /AIDS Control Programme, Colombo.

It is observed that the number of patients treated for sexually transmitted infections (STI) continue to increase. Data from the National Sexually Transmitted Diseases and AIDS Control Programme (NSACP) however, do not reflect the true magnitude of the problem, since it is estimated that only 15-20% of STD cases seek treatment from the government STD clinics (5).

Worldwide, the prevalence of HIV infection is rising at an alarming rate. As the HIV pandemic disperses from well defined high risk groups into the general population, HIV is becoming a significant problem for females and children. By the end of 1998 UNAIDS estimates reveal that there were 33.4 million people worldwide living with HIV, of whom 43% were women (6). Sri Lanka still remains a country with a low HIV prevalence (4).

Sexual behaviour patterns have an important role in STDs. These sexual behaviour patterns include new partner acquisition, multiplicity of partners and early sexual debut. Concomitant use of alcohol and illicit drug use may also influence an individuals sexual behaviour increasing the risk of infection. In addition, other factors believed to promote the acquisition of sexually transmitted infections, include inadequate access to prompt diagnosis and treatment of STDs and inconsistent and low rate of condom use. Underlying demographic, cultural and socioeconomic factors in the community are also contributory factors for the high prevalence of the disease (7).

The core group theory in STDs postulates that there is a central group or a core group of individuals who have a high prevalence of STDs (2). At the same time they act as reservoirs of infection and are responsible for disseminating the infection at a particular high rate thereby maintaining the infection in the community. Commercial sex workers belong to this group of high frequency transmitters and their role in the spread of STDs is obvious. Although only a minority of the population, they are vital to the perpetuation of STDS in the human population. In Sri Lanka over the years prostitution has turned out to be a lucrative

business and where ever prostitution flourished, high rates of STDs were found in the community. How to access this epidemiologically significant pool who are responsible for the spread of STDs remains the most vexed questions related to STD control

Bacterial STIs

Reports from the NSACP show that the incidence of gonorrhoea has been decreasing in the past few years (4). The reason being not so much because gonorrhoea is controlled in the population but because the first line of therapy has changed from the traditional injectable penicillin to single oral dose quinolones or cephalosporins which are easily accessible for self medication by over-the-counter purchase without prescription. The STD care seeking behaviour although not formally studied seems to be dominated by self medication or alternative non specialised treatment.

Another danger of indiscriminate use of antibiotics is the development of resistance to drugs. The emergence of resistant strains would contribute to the propensity of the infection. The prevalence of penicillin producing *Neisseria gonorrhoeae* (PPNG) in Sri Lanka during 1995-1997 remained low (4). A number of surveillance networks including a gonococcal antimicrobial susceptibility programme (GASP) sponsored by the WHO have been developed to monitor the extent and types of *Neisseria gonorrhoeae* resistant to antibiotics. Sri Lanka is a participant to this programme.

Chlamydia is an important STD all over the world. Screening for chlamydia infection is important as 70% of affected women and 50% of affected men are asymptomatic (8). The test is now routinely carried out at the central STD clinic in Colombo. Where this facility is not available due to its high cost, as an alternative, screening criteria combining demographic and behavioural markers and symptoms and signs should be drawn up to target women at high risk. The usefulness of any screening programme will however, depend on the prevalence of infection in the community and the sensitivity of the test performed. Untreated or inadequately treated gonococcal and chlamydia infections spread upward from the lower genital tract resulting in pelvic inflammatory disease (8). This complex illness consumes vast resources for its management and causes much suffering to the female in terms of chronic pelvic pain, menstrual disorders, ectopic pregnancy and infertility.

Syphilis, the classical STD has been in existence for over 500 years. It still remains a major STD in this country. It is possible that the true incidence of the disease is higher than what has been reported as the widespread use of antibiotics with an anti-treponemacidal effect may result in suppression of evidence of the disease which would not be diagnosed. The situation would be further complicated as such therapy will not necessarily cure the patient. Untreated syphilis in adults is known to cause damage to the nervous and cardiovascular systems. Although routine serological screening for syphilis is the policy in this country, it is not carried out effectively in spite of a well developed health infrastructure. Untreated syphilis in the mother could lead to congenital syphilis of the offspring. In 1997 seven cases of congenital syphilis were reported to the NSACP (4). Steps have now been taken with the assistance of UNFPA to strengthen the antenatal VDRL testing through out the country. Since many women who test positive have failed to receive appropriate treatment, it is also important to develop a mechanism by which the patient is referred to a specialized centre for confirmation of treponemal infection and treatment. This will be an opportunity to follow up the mother and her partner and offer epidemiological treatment to the newborn.

Viral STIs

Human papilloma virus (HPV) infection which causes genital warts is strongly suspected of playing an aetiological role in the pathogenesis of cervical cancer, its precursors and other squamous cell lesions of the lower female genital tract and the

anus (9). The Papanicolau smear (Pap smear) test that has the advantage of early detection of HPV infections is routinely carried out in the central STD clinic.

Hepatitis B virus infection is increasingly recognized on account of its association with liver cancer. The vaccine should be made available in the STD clinics for persons with high risk behaviours.

Herpes genitalis infection is becoming one of the leading STDs in Sri lanka. The psychological morbidity associated with the disease is more serious than the physical suffering. Treating the symptoms of the illness may not be a difficult task but the diagnosis of this stigmatizing illness has to be accurate. Thus the physicians should be trained in both diagnostic techniques and the skills of counselling as the sexual partner has to be involved in the management. Management is further complicated as the transmission of the virus from an infected mother (asymptomatic or symptomatic) during delivery may result in neonatal herpes in the baby.

Control and Prevention

One of the most important methods to control STDs is to make the general public aware of the dangers of promiscuous behaviours. It has to be acknowledged that in this country habitual promiscuity is more widespread than formerly. Many public health campaigns launched, at present, to prevent the spread of HIV do not aim at highlighting the importance of preventing the spread of STDs. Efforts should be taken to give the general public more information about these diseases and their danger and education to modify risk behaviour including promotion of condom use.

Prompt and effective treatment of STDs is another essential component in the control and prevention of STDs. The exact aetiological diagnosis of a STD can only be made if specially trained health care specialists and laboratory support are available. The physician who is treating STDs should be educated on the basic principles in the management of STDs. He should be aware of the interrelationships between the different STDs. The presence of any particular STD might increase an individual's chance of acquiring a concomitant STD. It is documented that a male who acquires gonorrhoea is at a 15-35% higher risk of being co-infected with chlamydia. This risk increases to 35-50% in females (8). In such situations treatment for dual infections becomes necessary. The risk of acquiring HIV is proved to be higher among people with both ulcerative and non-ulcerative STDs.

STD treatment guidelines should be available giving new therapeutic approaches, emerging antibiotic resistance, appropriate investigations that are necessary, interrelationships of STDs and other important concepts in STDs. Guidelines for Sri Lanka will be made available by the NSACP in the near future.

Unfortunately laboratory support necessary for correct aetiological diagnosis is always not available at the primary health care level. However the provision of such care does not need to be compromised owing to lack of sophisticated facilities. Taking into consideration these observations WHO has adapted the syndromic management to diagnose and manage STDs . In Sri Lanka, the NSACP has endorsed that the management of STDs must be seen in the context of primary health care in order to prevent and control STDs including HIV infection. In this direction medical officers at primary health care level are being trained by the NSACP in the syndromic management of STDs.

Although the unacceptable high incidence of STDs is undermined by the recent emergence of HIV, more attention should be drawn to these diseases on account of the magnitude and the impact it has especially on the mother and the child. In addition, the acquisition of STD is recognised as a sentinel indicator of the risk of HIV infection and it is obvious that the successful control of STDs could reduce the potential incidence of HIV.

References

1. Wasserheit J N. Epidemiological Synergy: interrelationship between HIV and other STDs. Sexually transmitted diseases 1992;19: 61-77

2.. Brunham R C, Plummer F A. A general model of sexually transmitted disease epidemiology and its implication for control. Medical clinics of North America 1990; 74:6:1339-1352

3. Gerbase A C, Rowley J T, Heymann D H L, Berkley S F B, Piot P. Global prevalence and incidence estimates of selected curable sexually transmitted diseases: Sexually transmitted infections 1998;74(suppl 1) S12-15

4. Annual Health Bulletin. Ministry of Health Sri Lanka. 1997: 47-49

5. Annual Health Bulletin. Ministry of Health Sri Lanka 1990:150-151

6. UNAIDS Facts and figures 1999 World AIDS campaign Joint United Nations Program on HIV/AIDS 1999:1-5

7. Aral Sevgi O, Holhes King K. Epidemiology of sexual behavior and sexually transmitted disease. In Holmes KK, Mardh PA, Sparling PF et al. eds. Sexually transmitted diseases. 2nd edition New York:Mc Graw Hill 1990: 19-42

8..Stamm Walter E, Holmes King K. Chlamydia trachomatis infection of the adult. In Holmes KK, Mardh PA, Sparling PF et al. eds. Sexually transmitted diseases. 2nd edition New York:Mc Graw Hill 1990: 181-193

9. Singer A. Epidemiological features of lower genital tract neoplasia. In von Krogh G, Rylander E, eds. GPVI. Genitoanal papill oma virus infection. A survey for the clinician. Karistad, Sweden: Conpharm/Kabi,.1989: 235-259