ABCD OF STI MANAGEMENT

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SFP2007; 33(2): 3-4

INTRODUCTION

STIs are a major public health problem in Singapore. Physicians frequently fail to inquire about sexual behaviour or counsel about risk reduction. There is a case to be made for a thorough sexual history taking and counselling on risk reduction when opportunity for such preventive care arise. To be effective, physicians need to demonstrate a non-judgmental, optimistic attitude in information gathering and patient education.

The common and important STIs are caused by *Treponema pallidium* (Syphilis), *Neisseria gonorrhoea* and *Chlamydia trachomatis*, Herpes simplex virus, Human papillomavirus, and Human immunodeficiency virus (HIV). Complications of untreated STIs include upper genital tract infection, infertility, Cervical Cancer and enhance transmission and acquisition of HIV disease. Diagnosis and management of STI is based upon disease or symptom specific syndromes, which include vaginal discharge, urethral discharge, genital ulcer, non-genital ulcer disease and pelvic pain. Many patients have asymptomatic disease, which increases the risk of community transmission.

PREVALENCE

Figures from the MOH website shows that about half of the new cases reported in the first six months of 2006 were aged between 30-49 years old. Persons between 20-29 years old and those aged between 50-59 years old each accounted for nearly a fifth of the cases. Approximately 60% of them were single, while 30% were married, 7% were divorced, and 3% were widowed. The total number of HIV infected Singaporeans as of end June 2006 is 2,852. Of these, 1,176 are asymptomatic carriers, 660 have AIDS-related illnesses, and 1,016 have died[1].

Heterosexual transmission has been the most common mode of HIV transmission among Singaporeans since 1991. This mode of transmission accounted for 88 out of the 149 cases in the first 6 months of 2006. Homosexual transmission occurred in 39 out of 149 total cases in the same period[1].

MANAGEMENT

The key strategy in the prevention of STI lies in the reduction of risk factors, screening of high risk groups, diagnosis and treatment of those infected – as well as their sexual partners – to interrupt transmission. The ABCD *aide memoire* of the potential of the GP consultation by Scott and Davis can be usefully applied in the management of STI too.

A. Acute Problems

The treatment regimes for the various STIs are covered in the various units of this Family Practice Skills Course. Suffice to say that treatment should be according to current guidelines. Several are available namely, the DSC (Kelantan Clinic) guide to Sexually Transmitted Disease 2007[2] and the CDC guidelines for treatment of Sexually Transmitted Diseases 2006[3].

Partner treatment is recommended if there has been sexual contact prior to the patient seeking treatment. For patients with multiple sexual partners, it may be difficult to identify the source of the infection. Patients should be instructed to avoid sexual contact for the duration of the treatment to ensure no further transmission of the disease.

B. Behavioural Modification

In order to implement an effective education and counselling tailored to an individual patient, there is a need to identify patient's risk profile. Therefore, it is important to obtain a thorough sexual history. The CDC 2006 STI guidelines recommend eliciting information in 5 key areas:

- Partners: Sex with whom; men, women or both? How often? Number of partners?
- Prevention of pregnancy: Contraception methods
- Protection against STI: What do you do to protect yourself from STI and HIV?
- Practices: What kind of sex? Use of condoms? Contact with sex workers?
- Past history of STIs: Do patient and partners have any previous STIs?

Personalised risk reduction counselling based on the sexual history obtained and the use of appropriate videos can be effective in reducing the incidence of new STIs. However, effective interventions to reduce STIs in adolescents may need to extend beyond the physician examination room to include school-base education and programs for behavioural change. Adolescents need to understand the consequences of their sexual behaviour.

Sexually active women must be made understand that non-barrier methods of contraception such as IUCD, oral, and parenteral contraception do not protect them against sexually transmitted disease.

Some have advocated abstinence to be the best for the prevention of STIs. An attempt at counselling should also be made. For sexually active patients, both male and female condoms are available, and both appear to be effective in reducing transmission of STIs. Its effectiveness depends on correct and consistent use. In the case of inexperienced users, providers should consider demonstrating how to place the condom on the penis using a suitable model. Condoms substantially reduce STI risk. Personal health information delivered in a caring and concerned way is likely to be effective.

C. Continuing Care

It is interesting to note that in Singapore, when a patient suspects that he has a sexually transmitted disease, he would go to another family physician other than his usual one. Such episodic care is likely to be inadequate. In a study conducted by Thomas A. Peterman and team[4], published in the Annuals of Internal

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Medicine in 2006, they concluded that men and women who received diagnosis of *C. trachomatis*, *N. gonorrhoea*, or *T. vaginalis* infections should return in 3 months for rescreening because they are at high risk for new asymptomatic sexually transmitted infections. Although single dose therapy may adequately treat the infection, it often does not adequately treat the patient. Asymptomatic infection in women can lead to asymptomatic pelvic inflammatory disease, ectopic pregnancy, and infertility. This study suggests that continuing of care for persons with diagnosis of STIs would benefit the patient and the community.

Identifying patients with reinfection or repeated infection is important in a public health perspective. They can receive extra attention to ensure that all their partners are treated and receive additional counselling about their ongoing risk and the correct and proper use of condoms. Identifying and treating such patients and their partners will prevent more infection in the community and potential complications.

D. Disease Prevention

Screening, diagnosis, and treatment of patients as well as their partners are key strategies in the prevention of STIs. Routine screening for all patients is cost prohibitive; it should be targeted instead at specific risk groups. Every patient who seeks treatment for STIs should have their risk profile assessed. A thorough sexual history is important in the assessment of risk. The risk factors for STIs are:

- Sex with a new partner in the past 60 days
- Multiple sexual partners
- History of prior STI
- Illicit drug use
- Admission to a corrective center
- Picking up sex partners on the Internet, night spots and cruising joints
- Contact with sex workers
- Frequent business travel

Screening should be individualised to the risk status. The following is a summary of recommendations in the 2006 CDC STI treatment guideline that are useful for daily practice:

- Clinicians need to assess sexual risk for all patients during routine clinical visits, particularly in adolescent and special risk groups such as MSM.
- All patients being evaluated for STIs should be offered counselling and testing for HIV.
- STI prevention efforts should include the use of barrier methods, including male and female condoms. Use of male condoms has been associated with a decreased risk of transmission of HIV, chlamydia, gonorrhoea, herpes simplex virus, and human papillomavirus.
- Hepatitis B and A screening should be offered to MSM, intravenous drug abusers, and persons with a history of multiple sex partners. Hepatitis B and A immunisation should be offered to all persons at risk of a STI.
- Asymptomatic women with risk factors for STIs should be screened for gonococcal or chlamydia infection during their annual pelvic examination. Cervical cytology should be obtained; immunisation against hepatitis B should be offered to those without evidence of past infection or past vaccination.
- The following tests for sexually active MSM are recommended on at least an annual basis: HIV antibody, testing for gonorrhoea and chlamydia, and syphilis serology.
- More frequent screening may be required in patients with high risk, especially those with multiple sex partners.
- Syphilis screening should be offered to commercial sex workers, people who exchange sex for drugs, and those in correctional facilities.
- Pregnant women should be screened for chlamydia, HIV, hepatitis B, and syphilis infections.
- HIV infected patients should be screen annually for *Neisseria gonorrhoea*, *Chlamydia trachomatis*, syphilis, and Hepatitis B and C.
- Partners should be notified, examined and treated for STI identified in the index patient. Patients and their sex partners should abstain from sexual intercourse until therapy is completed.
- Patients with genital HSV should be considered for suppressive therapy with antivirals.
- All patients with STI should be notified to Ministry of Health through the website: http://www.cdlens.moh.gov.sg.

CONCLUSIONS

All sexually active individuals are susceptible to infection. Based on worldwide statistics, adolescent and young adults are most commonly affected. This is because of:

1. Their biological susceptibility to increased morbidity,
2. Their attitude of invincibility, and
3. Their lack of knowledge of risks and consequences of STIs.

Family physicians should equip themselves with the ability to differentiate common STIs on the basis of clinical information and laboratory testing. Treatment of STIs should be according to current guidelines and often presumptive on initial presentation based on the clinical syndrome. Focused therapy is only possible on microbiological identification. This is often not feasible as delay in therapy will prolong symptom, result in untreated infection or continue spread of the disease, especially if the patient fails to heed advice and does not return for follow-up.

Family physicians have an important role to play in educating their patients on safer sex practices, and highlighting to them the consequences of unsafe sexual practices. Whether the patient is an adult or a young person, brief words of advice from the GP can make a world of difference.

REFERENCES

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