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VENEREAL DISEASES OF THE MALE
GENITAL TRACT

ESSAY

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By

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TO THE MEMORY OF MY FATHER

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INTRODUCTION

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Epidemiologic studies continue to add to the list of diseases known to be sexually transmitted. Acquired immune deficiency syndrome (AIDS) has only recently emerged as a disease that is usually transmitted by anal-oral contact among homosexuals who have multiple sexual partners.

The diseases discussed later are grouped according to their most common features. Those presenting with urethral discharge, those presenting with lesions of the skin and mucous membranes and those that occur most commonly among homosexuals.

EPIDEMIOLOGY OF S.T.D.

Epidemiology of sexually transmitted diseases :

The word "venereal", because of its associations with previous attitudes of disgust, shame and horror, is now seldom used in some countries. The term widely adopted is the less emotive "sexually transmitted diseases" (STD).

In tropical countries, these diseases differ from those in more technologically developed countries in four respects; first, they are many times more common; second, the pattern may differ with some diseases, such as chancroid and lymphogranuloma venereum being more common; third, their diagnosis and management is often difficult or has to be modified or simplified because of many constraints. Lastly the complications, are more commonly seen or they are even the presenting features.

Sexually transmitted diseases, although they are behavioural diseases, can be discussed from the point of view of host and environmental factors. Some are inter-related.

HOST FACTORS :

Age

Sexual activity is greatest from adolescence to the third decade. Most studies of incidence show that the greatest number of cases occur in the age group 18-35 years.

Sex

Figures from many countries show a preponderance of male cases. This can be explained because of demographic factors such as more young males being in urban centers and resorting to a small pool of prostitutes. Another explanation is that men recognise the lesions more easily and present early for treatment.

Socioeconomic status, occupation and mobility :

Certain occupations are more at risk to exposure and poor treatment. Barmaids, taxi-drivers, soldiers, sailors, overland truck drivers, salesmen, hotel and restaurant staff, night-club musicians and students are all well-documented high risk groups. Due to mobility, they have difficulty in getting proper treatment.

Some diseases, such as chancroid, are associated with poverty and poor hygiene. Riches, on the other hand, are no protection and in many developing countries the newly rich are able to buy their disease from expensive prostitutes.

Marital status :

A stable marriage with both partners living together protects the couple from venereal diseases. However, living apart is very conducive to the transmission of STD .

Knowledge and sexual practice:

Education brings knowledge of the effectiveness of treatment and of contraceptives in preventing pregnancy. It can thus eliminate two of the fear motives that could act as restraints. In developing countries the use of contraceptives has not yet been shown to be related to increased promiscuity but this might occur in the future. The educated do use condoms more often but for many their use is still blocked by attitudes of disgust and revulsion and a conviction that they will interfere with sexual pleasure.

Psychological state and social crisis :

Drug takers, inadequate personalities, alcoholics and those who have had broken homes and a disrupted

socialisation are especially at risk. Some of these may act as "core transmitters" of STD and responsible for maintaining the infection in certain areas.

ENVIRONMENTAL FACTORS :

Development :

In many developing countries venereal disease is spreading along major routes of communication. Areas with no previous connection with the cities or seaports may suddenly be faced with a problem of STD when a new road is opened and the taxi-drivers and heavy transport drivers constitute a new market for women with no available source of income.

The social environment :

Rapid industrialisation and urbanisation in many countries has led to migration of labour, transition of tribal life to urban life, family disruption, housing problems, loneliness and altered codes of behaviour and promiscuity. This social disorganisation favours spread of STD .

GONORRHOEA

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GONORRHOEA

Gonorrhoea, an infection of the mucosal surfaces of the genito-urinary tract with bacterium *Neisseria gonorrhoeae*, is mainly transmitted by sexual intercourse. The infection is associated with acute purulent urethritis in approximately 90 % of cases but the organism may spread also to the epididymis and prostate.

Aetiology :

- The causative organism is gonococcus *Neisseria gonorrhoea* which derives its genetic name from Albert Neisser 1879 .
- *Neisseria gonorrhoea* are small ~~Gram~~-negative cocci, kidney shaped and arranged in pairs (diplococci). The organisms are typically intracellular. Kellogg (1963) and his co-workers described four distinct colony types referred to as T₁ to T₄. An additional colony T₅ recognized by Jephcott, (1971).

Bacteria from type 1 and 2 are virulent for human volunteers and possess pili, whereas colony type 3 and 4 are avirulent and lack pili. Swanson, (1973) and Heckels et al, (1976) described that pili of colony type 1 and 2 attach the organisms to epithelial cells more readily

than do organisms without pili. Pili may also make gonococci more resistant to phagocytosis. Gonococci are antigenically heterogenous and no widely accepted method of typing strains. Holmes et al (1975) put a system of classifying gonococci based on their nutritional requirements known as auxotyping. This system has been used to show that gonococci that require arginine, hypoxanthine and uracil for growth are highly sensitive to penicillin G. Johnston et al., (1976) described 16 gonococcal outer membrane protein immunotypes. Recent classification by Wang et al (1977) classify *N. gonorrhoea* into immunotypes by micro - immunofluorescence method.

Pathogenesis of gonorrhoea :

Primary infection commonly occurs in the columnar epithelium of the urethra and para-urethral ducts. Rarely the infection may occur in the soft squamous epithelium of the glans penis. During acute gonococcal urethritis, by the third day of infection, gonococci have penetrated the mucosal lining of the urethra and have become established in the subepithelial connective tissue.

The capillaries are dilated and there is an exudation of cells and serum. Dense cellular infiltration consisting of polymorphonuclear leucocytes, plasma cells