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Sexually transmitted diseases in Lusaka

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SUMMARY

This is a preliminary epidemiological report on sexually transmitted diseases in Zambia. An analysis of data derived from a sample study of 1,000 consecutive female and 5,000 male S.T.D. patients seen at the University Teaching Hospital in Lusaka, is presented.

The predominant diseases and the prevailing socio-economic, cultural and other factors responsible for the high prevalence of S.T.D. in Zambia are discussed.

INTRODUCTION

Since Independence the health services in Zambia have vastly expanded and modern medical treatment is available to everyone in the country. However, malaria, bilaharziasis, trypanosomiasis and malnutrition in children are prevalent and continue to be the prime concern of health authorities. In this background venereology remained grossly neglected, despite the general impression that sexually transmitted diseases (S.T.D.) were alarmingly prevalent in this country. There had never been any special clinics to treat these cases and as such there was little awareness among the medical staff of the needs of proper diagnosis and treatment.

The first S.T.D. clinic in the country was established in 1977 at the University Teaching Hospital (U.T.H.) in Lusaka. Lusaka has a population of about 560,000 which is served by about twenty government clinics and many private practitioners in addition to U.T.H. which is a referral centre. This hosptial is equipped with all basic amenities for investigative procedures.

A sample study was undertaken in the S.T.D. clinic to assess the problem of S.T.D. and to analyse their basic epidemiological aspects.

MATERIALS AND METHODS

A consecutive number of 5,000 male and 1,000 female patients were screened in this study over a period of 6 months. All these patients came to U.T.H. with problems related to S.T.D.

All the female patients had a complete venereological examination. Saline smears of vaginal swabs were examined for trichomonas and candidial infections. Urethral and endocervical swabs were taken for Gram's stain examination and cultures on V.C.N.T. selective medium were made at the same time in all cases.

Male patients with urethral discharges and related problems were seen in a special clinic. Saline smears and Grams staining of the discharges were routinely examined in all patients at each attendance. In the absence of discharge, smears were made from urethral scrapings and similarly examined. Cultures for gonococci in males were not routinely made excepting in few cases when negative results on Gram's stain were considered incompatible with the clinical impression of gonococcal infection.

Diagnosis of genital ulcers was made on typical clinical presentation. All the 6,000 patients included in this study were screened by an automated reagin test using VDRL carbon antigen and in every positive case the reagin titre was quantitated by VDRL slide test.

RESULTS

The 5,000 males and 1,000 females included

in this study were seen over a period of 6 months. This total of 6,000 S.T.D. cases was 7% of the number of all patients who attended U.T.H. with various ailments over this period.

Table 1 gives important social background data on our patients. A great majority of both males and females were aged between 20 to 30 years. Fifty point five per cent of males and 70.6% of females were married. Fifty-six per cent of males had history of previous venereal infections and a considerable number of them suffered many times in the past. Eleven point one per cent of females had previous venereal infections. Seventy-two per cent of males gave history of multiple sexual exposures. A further 19.6% had at least more than one sexual consort and occasional history was obtained in the remaining males. Fifteen point three per cent of the females had multiple exposures. Seventy-seven point two per cent of infections in males followed casual sexual contacts made in bars, hotels, bus and railway stations etc. Such casual acquaintances were admitted by 13.5% females. Thirty-two point four per cent blamed a regular consort and 54.1% alleged to have been infected by their husbands.

TABLE I

ANALYSIS OF DATA FROM 2000 MALES AND 1000 FEMALE PATIENTS

	Males	Females
Age	(%)	(%)
A. 15 to 20 years	11.5	31.5
B. 20 to 30 years	71.5	58.8
C. Above 30 years	17.0	9.7
Marital Status		
A. Married	50.5	70.6
B. Unmarried	49.5	29.4
Previous Venereal Infections		
A. Present	56.0	11.1
B. Absent	44.0	88.9
Habits		
A. Multiple Sexual Exposures	72.0	15.3
B. Few	19.6	65.9
C. Occasional History	8.4	13.8
Source of Infection		
A. Casual Partner	77.2	13.5
B. Friend	12.1	31.4
C. Spouse	10.7	54.1

Vaginal discharge was the presenting complaint in 92% of female patients. Fifty-five point three per-cent of males had genital ulcers and 37.1% had urethral discharge. Table 2 gives analysis of diagnoses in males. The predominant disease was gonorrhoea (27%) followed by chancroid (2. 8%) and non-specific genital ulcer (17.5%). Non-gonococcal urethritis was diagnosed in 10.1% and balano-posthitis in a significant number (6.8%). Less common diseases were syphilis (2.1%), warts (2.2%) and venerophobia (1.1%) in that order. Granuloma venereum was seen in only 10 males (0.2%).

Table 3 gives an analysis of diagnoses in females. Trichomoniasis was discovered in 52.2%, followed by gonococcal infection (18.8%), candidiasis (10.6%), non-specific vulvovaginitis (10.4%), and syphilis (9.2%). Chancroid was not uncommon (7.4%). Non-specific genital ulcer (2.6%), lympho-granuloma venereum (2.4%), herpes genitalis (1.5%), warts (1.2%) and granuloma venereum (0.8%) were less frequently seen.

VDRL was reactive in 8.8% of females and 5.1% of male patients. (Table 4).

TABLE II

ANALYSIS OF DIAGNOSIS IN 5000 CONSECUTIVE MALE S.T.D. PATIENTS

Diagnosis	Percentage
Gonococcal Urethritis	27.0
Chancroid	21.8
Non-specific Genital Ulcer	17.5
Non-gonococcal Urethritis*	10.1
Balano-posthitis	6.8
Syphilis Primary Chancre 1.9 Secondary Rash 1.3	3.2
Lympho-granuloma Venereum	3.1
Herpes Genitalis	2.7
Genital Warts	2.2
Venerophobia	1.1
Granuloma Venereum	0.2

* Inclusive of Trichomoniasis

DISCUSSION

The incidence of S.T.D. has always been known to be high in Africa. Venereal syphilis was reported

to be endemic in Ethiopia (Friedman and Wright, 1977) and Uganda (Odongo, 1977). Uganda was also reported to be endemic for gonorrhoea (Kibukamusoke, 1965a). Similar trends were also reported in Kenya, Nigeria and Central African Republic. (Verhagen and Gemert, 1972; Carty, Nzioki and Verhagen, 1972; Osaba, 1974 and Anne Retel-Laurentin, 1974). The data derived from this study provides the first information as to the extent of the problem of S.T.D. in Zambia and the nature of common diseases encountered. According to the statistics compiled by the Ministry of Health, a total number of 96,571 new S.T.D. cases were seen in 1974 with an incidence of 20.6 per 1,000 population. By 1976 this number had increased to 147,207 with a rate of 28.7 per 1,000 population.

The age grouping shows (Table 1) that 83% males and 90.3% females were between 15 and 30 years with relatively greater number of females, among the teenagers. Thirteen per cent of the female patients were school-going girls. A male to female ratio of 5:1 attendance indicates a dangerous problem of an untreated resevior infection in our female population.

The high promiscuity rate among our patients can be readily perceived from the history of multiple exposures in a great majority of patients. Seventy-seven point two per cent of men and 13.5% of women were infected following casual acquaintances. It is difficult to assess the magnitude of prostitution among these casual contacts. According to a recent survey there is heavy rate of alcohol consumption in Zambia. It has been reported that 64% of boys and 26% of girls in secondary schools with ages between 15 and 19 are drinking (Professor A. Haworth, personal communication). The implication of these findings on the incidence of S.T.D. in the country is obvious.

Gonococcal infection was the most predominant disease in males as well as females. The incidence of complicated gonorrhoea in men and women remains to be assessed in our hospital. However, urethral stricture in males appears to be much less common than in Uganda (Kibukamusoke 1965b).

Syphilis was seen in 9.2% of females and 3.2% males. Most of the female cases (7.7%) were seen with condylomata, which happened to be the most predominant lesion of the secondary stage in females. Three cases of congenital syphilis were seen during the period of this study. Since the majority of these cases are seen by pediatricians the true incidence is expected to be higher. The higher incidence of syphilis in females in this study was also corelated by the V.D.R.L. positivity rate of 8.8% compared to 5.1% in males (Table 4). Since most of these females were in the secondary stage it is conceivable that the disease may be responsible for a considerable number of abortions and perinatal foetal deaths. It also brings to light the enormous reservoir of infection existing in females. Late syphilitic manifestations are very rarely seen in this hospital. Cardiovascular syphilis is occasionally diagnosed and neurosyphilis, so far, has not been reported in Zambia. An intensive study of 273 cases of neurological admissions to U.T.H. in a two year period did not reveal a single case of syphilis (Chuke, Harrison and

TABLE III

ANALYSIS OF DIAGNOSIS IN 1000 CONSECUTIVE FEMALE S.T.D. PATIENTS

Diagnosis	Percentage
Trichomoniasis	52.2
Gonococcal Infection	18.8
Candidiasis	10.6
Non-specific Vulvo-vaginitis	10.4
Syphilis Primary Chancre 1.5 Condylomata Lata 7.7	9.2
Chancroid	7.4
Non-specific Genital Ulcer	2.6
Lympho-granuloma Venereum	2.4
Herpes Genitalis	1.5
Genital Warts	1.2
Granuloma Venereum	0.8

TABLE IV

V.D.R.L. RESULTS

Source	Number	Positive Reactors (%)
Female S.T.D. Patients	1000	8.8
Ante-Natal Women	2646	3.7
Male S.T.D. Patients	5000	5.1
Male Blood Donors	1798	2.3

6.4% of 142,662 Sera tested from 1974 to 1977 in U.T.H. laboratory were reported positive.

Raman, 1974). As far as we are aware, Zambia has never been endemic for non-venereal treponematoses.

Trichomoniasis was the commonest disease in females and frequently presented with ulcerative vulvo-vaginitis. It was co-existent with 40% of gonococcal infections and 45% of candidial infections in women. In men the organism was identified in 25% cases of non-gonococcal urethritis. The incidence of trichomoniasis in both sexes in our study was significantly high. From a cancer survey of 38,000 women in the U.S.A. Ipsen and Feigl (1970) calculated that the risk of infestation with trichomoniasis among negroes was three times higher than among those of Caucasian origin. There have been few reports on incidence of trichomoniasis in other African countries. Osaba (1974) reported an incidence of 15 to 20% in Nigerian women.

Chancroid was the commonest cause of genital ulcers in both men and women. Phagedenic ulceration was not uncommon in men. Poor personal hygiene contributed to greater incidence of balano-posthitis. The incidence of lympogranuloma venereum, genital herpes and warts in our patients was not significantly different from other tropical areas. Granuloma venereum was seen in 8 females and 10 males with an overall incidence of 0.3%. It is relatively more common in females (0.8%). In an earlier study (Bhangwandeen and Naik; 1977) a total number of 42 cases were hostologically diagnosed in the pathology laboratory of U.T.H. in a period of three and half years.

The present study indicates that S.T.D. are as prevalent in Zambia as in many other African countries, where ever statistics are available. The entire African continent has been passing through a quick socio-economic change with many countries in the process of rapid industrialisation and urbanisation. There are many common phenomena that can be observed in these countries which are contributory to the increased prevalence of S.T.D. First and foremost the continuing process of large population movement from the villages to the towns and cities has been responsible for the swift change in the attitude and behaviour of the people concerned. A casual attitude towards sex and permissiveness is an associated feature very much conducive to the prevalence of S.T.D. This situation is aggravated by poor personal hygiene, inadequate medical facilities and lack of concern by the health authorities of the seriousness of this common public health hazard. There is an urgent need for concerted international action to stimulate the interest of the various health authorities in Africa to implement adequate measures for the control of sexually transmitted diseases.

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REFERENCES

1. *Anne Retel-Laurentin (1974) Sub-fertility in Black Africa; the case of the Nzakara in Central Africa Republic in Sub-fertility and infertility in Africa (Ed. by B. Kwaku Adadevoh) p. 69, The Caxton Press Limited, Ibadan.*

2. *Bhagwandeen, B.S. and Naik, K.G. (1977). East African Medical Journal 54, 637.*

3. *Carty, M.J., Nzioki, J.M. and Verhagen, A.R. (1972) East African Medical Journal 49, 376.*

4. *Chuke, P.O., Harrison, J.D. and Raman, R.L. (1974) East African Medical Journal 51, 160.*

5. *Friedmann, P.S. and Wright, D.J.M. (1977) – British Journal of Venereal Diseases. 53, 276.*

6. *Ipsen, J., and Feigl, P. (1970) Cited by Morton, R.S. (1975) Epidemiological and social aspects of trichomoniasis in; (Ed. by R.S. Morton and J.R.W. Harris) p. 205, Churchill Livingstone, Great Britain.*

7. *Kibukamusoke, J.W. (1965a) British Journal of Venereal Diseases 41, 135.*

8. *Kibukamusoke, J.W. (1965b) Transaction of the Royal Society of Tropical Medicine and Hygiene 59, 642.*

9. *Odongo, E.A.I. (1977), East African Medical Journal 54, 385.*

10. *Osaba, A.O. (1974) The role of sexually transmitted diseases in infertility among Nigerians in: Sub-fertility and Infertility in Africa. (Ed. by B. Kweku Adadevoh) p. 81. The Caxton Press Limited, Ibadan.*

11. *Verhagen, A.R., and Gemert, E. (1972). British Journal of Venereal Diseases. 48, 177.*