Patterns Of Genital Ulcer Diseases Among Hiv/Aids Patients In Benue State, North Central Nigeria

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Citation

Abstract
Aim To ascertain the pattern of genital ulcer diseases (GUDs) among HIV infected people of Benue state. Procedure The study was retrospectively carried out in Makurdi and Oturkpo. Data from HIV patients who presented with GUDs was compiled for a period of 10 years (June 1999- May 2009). Relevant information from patients records such as: age, sex, occupation, clinical information on GUDs, clinical and or laboratory diagnosis, treatment and treatment outcomes were extracted. Samples were collected, stored and processed using standard laboratory procedures. Data obtained was analysed using Epi Info 2002 statistical software. Results The incidence of HIV was found to be 72.38% (506 out of 699) among the GUDs patients. Among the HIV patients, Genital herpes and Chancroid were respectively recorded in 76.21% (221 out of 290) and 81.69% (165 out of 202) of the them, (P< 0.05). Other GUDs encountered in both HIV and non-HIV patients were respectively: Lymphogranuloma venereum (52.33% and 47.67%), Syphilis (51.67% and 48.33%), and Condylomata acuminate (56.42% and 43.58%) with no significant difference in rate of occurrence between the two groups (P> 0.05). Granuloma inguinale was only found in HIV patients. Conclusion While detection of genital herpes and chancroid should be considered a warning sign for probable HIV infection in the locality, more results oriented measures should be put in place in order to bring HIV infection, GUDs as well as other STDs under check. Also syndromic management should be intensified and among others adequate provision be made for these GUDs.

INTRODUCTION
The origin of sexually acquired genital ulcer diseases (GUDs) still appears deeply buried in antiquity 1. This group of diseases have, more than ever before, continued to be of major public health importance 2. The advent of HIV/AIDS over the past 25 years has further deepened the scope of the morbidity, mortality and various forms of clinical presentations GUDs 3-5. HIV/AIDS, which has no doubt created a fertile ground for sexually transmitted diseases (STDs) to thrive, and STDs, vice versa, presently poses a serious health threat to at least a billion people of the global community 6-8. Studies have severally reported a high incidence of genital ulcers among HIV/AIDS patients as compared to the non AIDS group 9,10. Findings from Spain 11 showed that herpes, syphilis and chancroid were the commonest genital ulcers encountered among AIDS patients, and they inturn increased the risk of contracting HIV/several fold. Similarly, in India 12, genital ulcers such as herpes, syphilis, lymphogranuloma venereum, granuloma inguinale, and chancroid were the most encountered GUDs among HIV/AIDS patients. In Sao Paulo Brazil 13, herpetic and auto immune ulcers were the most frequently encountered GUDs in 53 women presenting at a clinic with out definitive diagnosis, and non-STD disorders such as: Behcet’s syndrome, pemphigus, crohn’s disease, and erosive lichen planus were identified as significant predisposing factors to GUDs. And in Jamaica 14 a cross-sectional survey showed that genital herpes, granuloma inguinale, chancroid and viral warts were the commonest GUDs encountered in HIV/AIDS patients. Although the nature and patterns of GUDs among HIV/AIDS patients has been well documented in several parts of Africa 15-17, little information is presently available from most parts of north central Nigeria which is regarded highly endemic for HIV infection 18. Identification of the prevalent GUDs in HIV/AIDS patients in the locality would be an important guide towards choice of procurement and supply of relevant medications to the health centres in the region. This would in turn save institutional costs as well boost a more informative syndromic management of these...
patients.

**MATERIALS AND METHODS**

Setting The study was carried out in Makurdi, the capital city of Benue state; and Oturkpo town located in the south eastern part of Benue, about 100 kilometres from Makurdi. In Makurdi city is sited the Federal Medical Centre (FMC) which is the main referral health centre for the state. Also in Oturkpo town is sited the Oturkpo General Hospital. This serves the major health needs of the local government area (LGA) as well as a referral health centre for several other neighboring LGAs of the state and beyond.

Procedure Data generated from cases of genital ulcers from the Out and In patient clinics on HIV/AIDS patients of the two health centres was compiled for a period of Ten years (June, 1999 to May, 2009). Data on age, sex, occupation, type of genital ulcer, clinical information, and laboratory diagnosis as well as choices of drugs used and treatment outcomes were compiled from patients’ records over the study period. Swabs from genital ulcers were collected, transported, stored and processed using standard laboratory procedures. Specific diagnosis of genital ulcers was based on available medical history, clinical judgment, laboratory diagnosis (culturally and serologically including HIV) and, retrospectively on choices of drug therapy and treatment outcomes. Other relevant information such as gender, age and occupation of patients were also obtained from the patients’ records.

Analysis of Results Results obtained were analysed using Epi Info 2002 statistical software, P values ≤ 0.05 was considered significant.

**RESULTS**

From June 1999 to May 2009, 699 cases of GUDs were documented from the two health centres under study and the rate of HIV seropositivity among them was found to be 72.38% (n=506) (P< 0.05), (Figure 1).

Of the 506 HIV/AIDS patients with GUDs attended to at the two health centres, 65.0% (n=329) were males and 35.0% (n=177) were females. Those aged 30-39 years were 27.7% (n=140) and were the largest number, followed by 20-29 years range (21.74%, n=110), then those 40-49 years (20.94%, n=106). The age range with lowest figure of GUDs were those 70 years and above (1.38%, n=7), (Table 1).

A grouping of the HIV patients based on the types of genital ulcers showed that: Genital herpes was 43.68% (n=221), Chancroid 32.61% (n=165), Lymphogranuloma venereum 8.89% (n=45), Syphilis 6.12% (n=31), Condylomata acuminata 4.15% (n=21), Granuloma inguinale 3.55% (n=18), while 0.99% (n=5) of the lesions were unclassified. Genital herpes was commonest in both males and females 31.23% (n=158) and 12.45% (n=63) respectively. Granuloma inguinale and Condylomata acuminata were the least common GUDs encountered in males and females, 0.59% (n=3) and 1.58% (n=8) respectively, (Table 2).

Genital ulcers present in patients who were HIV negative were: Genital herpes 35.75% (n=69), Chancroid 19.20% (n=37), LGV 21.24% (n=41), Syphilis 15.00% (n=29), Condylomata acuminata 8.81% (n=17). Based on HIV infection, 76.21% (n=221) and 81.69% (n=165) of the patients with Genital herpes and Chancroid respectively were HIV seropositive, (P< 0.05). There was no significant association between the rate of occurrence of other GUDs present in both HIV and non-HIV patients, (P> 0.05) (Figure 2).

Based on occupation, GUDs were distributed among the subjects as follow: Commercial driver 27.50% (n=139), Commercial motorcyclist 17.20% (n=87), Civil servant 23.32% (n=118), Undergraduate student 7.50% (n=38), Secondary school student 2.56% (n=13), House wife 6.12% (n=31), Farming 6.32% (n=32), Applicant 1.77% (n=9), and 7.71% (n=39) which were unclassified. One Hundred percent (n=32) of the farmers, 75% (n=104) of the commercial drivers, and 81% (n=70) of the commercial motocyclists had no formal education, (Table 3).

**Figure 1**

Figure 1. Rate of GUDs among HIV positive and HIV negative patients in Benue state
**DISCUSSION**

Among the HIV/AIDS attendees with GUDs at the two health centres, the female gender constituted 35% of the 506 subjects. This finding appears different from the general pattern of presentations of STDs with often higher frequency among females compared to males\(^{20}\). Though in Kigali, Rwanda\(^{21}\), more men (57%) were also reported to have presented at a primary health clinic with GUDs, the level of
confidentiality generally attached to STDs in the course of seeking for preferred medical attention could probably have contributed to the low figure recorded among females in the present study. The high incidence of GUDs among those aged 20-49 years is understandable as this corresponds to the most sexually active age with the attendant risk for transmission of both HIV and other STIs. A workable control plan of action targeted at this age group, though not exclusive, centered on their routine activities and life styles would reduce both then spread of HIV and other STDs.

The high rate of genital herpes and chancroid recorded in Benue state compares favorably with the findings of: O’Farrell, et al in Durban South Africa, Risbud et al in Pune, India, and Ahmed et al in Tanzania who recorded high rates of these diseases from 26% to 63%. The fact that a large proportion of the subjects with GUDs had no formal education implies that proper education with relevant health components would contribute significantly to bringing down the incidences of these diseases.

Production of pamphlets, hand bills and posters with educative pictures and inscriptions should be distributes at motor parks, major bus stops, markets as well as other social gatherings in rural and semi-urban communities on the modes of prevention and control of STDs. This could be translated to the local languages so as to enhance understanding. Also the inclusion of potent antiviral drugs in syndromic management of GUDs should be emphasized especially where accurate clinical and laboratory diagnosis prove difficult. This approach becomes even more beneficial in most tropical and sub-tropical regions of the world where more often than not facilities for appropriate laboratory diagnosis of infections and infestations are lacking.

Similar findings were reported about syphilis, LGV and genital warts by Ahmed et al in Tanzania, where T. pallidum was recovered from 13% of the genital ulcers; Lama et al in Lima Peru, where syphilis and HSV-2 were found in 13.4% and 46.3% of the patients respectively; and Behets, et al in Kingston Jamaica where HSV, H. ducreyi and T. pallidum were recovered from 52%, 23.7%, and 10.2% of the HIV patients with GUDs.

There was a significant association (P< 0.05) between the presence of genital herpes and chancroid, and HIV infections as 76.21% and 81.69% of the patients with these GUDs respectively were infected with HIV. This finding partly agrees with that of: Fennema et al in Amsterdam, The Netherlands where a relative risk (RR) of 7.64 for herpes was documented; Chen, et al in South Africa, who recorded a significantly higher incidence of genital herpes (39.4% versus 21.4%) among HIV patients compared to the HIV negative; and Kaur, et al in Delhi, India where a seroprevalence of 85.2% HSV-2 was recorded in HIV patients. A presentation of genital herpes and chancroid to clinics in Benue state should raise a strong suspicion for a probable HIV infection and management patterns also designed as such.

The findings from this study are however different from that of Gbery, et al in Abidjan Cote d’Ioire where Streptococcus species, Pseudomonas aeruginosa and cutaneous amoebiasis were encountered in chronic genital ulcer lesions of HIV patients. Also granuloma inguinale, contrary to the findings in the present study was scarcely documented in different parts of the world. The need to open up to as many possibilities as possible in carrying out clinical assessment of ulcerative genital lesions becomes necessary. The findings of Behets, et al in Jamaica on the low clinical accuracy in the diagnosis of GUDs attests to this fact. Also the strong association of chancroid with HIV infection as observed in this study was not reported by several authors. In addition to being the probable pattern of the GUDs prevalent in a locality, the influence of other environmental and social factors may not completely be ruled out in the regional and geographic variations of these diseases. This however may be another avenue for further studies.

Appropriate health education aimed at breaking down the wall of stigmatization, freeing patients from residual feeling of guilt, and provision of carefully planned incentives for potential patients with GUDs should constitute a significant proportion of the overall prevention and control programme for HIV and other STDs. Also, provision of counseling and rehabilitation facilities as well as a well planned syndromic management protocol with an efficient and functional referral service system should be a veritable compliment.

In conclusion, GUDs were found to be generally commoner among HIV patients compared to the non-HIV patients especially genital herpes and chancroid. Control measures presently in place for control of HIV, GUDs and other STDs should be reviewed and appropriate amendments instituted in order to keep pace with the present onslaught of these
deadly diseases.

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