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## Clinical status and prevalence of viral STDs in Warangal, Andhra Pradesh

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### Abstract

Sexually transmitted diseases (STDs) have great impact on health of the individual and community. Prevalence of STDs varies in developing countries like India. Bacterial STDs are becoming less common and viral STDs are increasing. Therefore we conducted this study to investigate clinical status and prevalence of Viral STDs. The author has attended STD clinic MGM hospital Warangal during 2008 to 2010 and interacted with registered STD patients and recorded symptoms of STDs. Percentage of Genital herpes patients was higher 17.03%(2008), 14.86% (2009) and 16.52% (2010) than other viral STDs. Least percentage of HIV/AIDS in STDs was observed 2.25%(2008), 1.60%(2009) and 1.93% (2010). Prevalence of viral STDs was more in men than women all the years of study period. Overall, there was not significant increase in viral STDs from 2008 to 2010 when compared to population growth.

**Keywords:** Genital herpes; Genital warts; HIV/AIDS.

### Introduction

Sexually transmitted diseases (STDs) include diseases that are transmitted by sexual intercourse. Sexually transmission requires the agent to be present in one partner, the other partner to be susceptible to infection with that agent and that the sex partners engage in sexual practices which can transmit the pathogen. STDs rank among the five leading health problems in the developing countries (Center For Disease Control and Prevention MMWR, 1997). WHO estimated that during 1995, 400 million cases of STDs globally including 50 million in India (The World Health Reports, 1998). A variety of demographic and medical factors contribute to the high prevalence of STD, especially in the developing countries, where large percentage of population belongs to sexually active age group (Mabey, 1999). In the STD clinic in UK, 9% increase in incidence of STD was observed between 1996 and 1997 (Huge, 1998). The annual number of genital herpes has almost tripled during the past 15 years in England. The genital herpes were so rare that they even merited publication as case reports. In the developed countries, there is a significant rise in viral STDs and relative fall in the incidence of the traditional infection. In the 1980s, herpes infection accounted for 17% of the genital ulcers in Singapore and 12% in Bangkok. Genital herpes simplex virus infection is now one of commonest STD afflicting both

men and women. The incidence has assumed major public health problem because of association with HIV infection.

Symptoms of this disease include watery blisters in the skin or mucous membrane of the mouth, lips and genitalia (Rayan, 2004). HSV generally transmitted from contact with an infection area of the skin during reactivation of the virus. A typical symptoms are often attributed other cause such as a yeast infection (Gupta, 2007). HSV-1 and HSV-2 viruses may also be transmitted vertically during child birth (Corey, 2009). The risk is considerable when the mother gets the virus for the first time during late pregnancy (Kimberling, 2007).

Although a wide variety of HPV types can cause genital warts, type 6 and 11 account for about 90% of all cases (Gearheart, 2004). Experts do not agree on whether the virus is completely eliminated reduced to or undetectable levels and difficult to know if one is contagious (Gilbert, 2003). The first studies of AIDS in central Africa identified prostitutes and heterosexually promiscuous men as high risk groups (Kreissj, 1988). HIV infection has now spread to every country in the world. Approximately 40 million people are currently living with HIV infection and estimated 25 million have died from this disease. There is a resurgence of interest in STD among both research and health policy makers since their role facilitating transmission of HIV has been

established. Given this situation the control of STD to prevent the transmission of HIV infection is now considered a public health problem. There is mounting evidence, however, that STDs may be important cofactor for enhancing HIV transmission (Pepin, 1989). There is scarcity of information concerning HIV infection in patient with STDs in our area. We conducted a study among STD clinic attendees to asses this issue.

**Materials and Methods**

STD testing clinic and counseling room at MGM (Mahatma Gandhi Memorial) hospital, Warangal is well established. STD symptoms of patients from different villages of Warangal (district) who have attended the STD clinic during Jan. 2008 to Dec. 2010 were recorded. On the basis of the symptoms, patients have been classified into different types of viral STDs. Standard proforma

was followed to record presenting complaints. The patients were explained and counseled regarding the steps of examination. Different types of lab procedure were followed (Dyck, 1999; Richens, 1991; Strand, 1998).

**Results**

People from different places of Warangal (district) who have registered for STD testing were 3945 (2008), 5974 (2009) and 12603 (2010). Viral STDs were 549 (2008), 667 (2009) and 719 (2010). Different types of viral STDs, percentage wise, year wise, gender wise details are presented in tables 1-2 and fig 1-2. Prevalence of genital herpes was highest among all other viral STDs and followed by genital warts and HIV/AIDS. There was not significant change in the prevalence of different types of viral STDs in the year 2009 and 2010.

**Table1: Number and percentage of different types of viral STD patients during 2008, 2009 and 2010.**

| Name of Disease | 2008 |       | 2009 |       | 2010 |       |
|-----------------|------|-------|------|-------|------|-------|
|                 | N    | %     | N    | %     | N    | %     |
| Genital warts   | 78   | 3.19  | 152  | 4.88  | 119  | 3.66  |
| Genital herpes  | 416  | 17.03 | 462  | 14.86 | 537  | 16.52 |
| HIV/ AIDS       | 55   | 2.25  | 50   | 1.60  | 63   | 1.93  |

N = Number, % = Percentage

**Table 2: Number and percentage of viral STD among men and women during 2008, 2009 and 2010.**

| Name of Disease | 2008 |       |        |      | 2009 |       |        |      | 2010 |      |        |      |
|-----------------|------|-------|--------|------|------|-------|--------|------|------|------|--------|------|
|                 | Male |       | Female |      | Male |       | Female |      | Male |      | Female |      |
|                 | N    | %     | N      | %    | N    | %     | N      | %    | N    | %    | N      | %    |
| Genital warts   | 45   | 3.24  | 33     | 3.12 | 72   | 3.99  | 80     | 6.11 | 90   | 4.93 | 29     | 2.03 |
| Genital herpes  | 337  | 24.29 | 79     | 7.48 | 636  | 20.15 | 99     | 7.56 | 412  | 22.5 | 125    | 8.76 |
| HIV/ AIDS       | 33   | 2.37  | 22     | 2.08 | 24   | 1.33  | 26     | 1.98 | 43   | 2.35 | 20     | 1.40 |

N = Number, % = Percentage

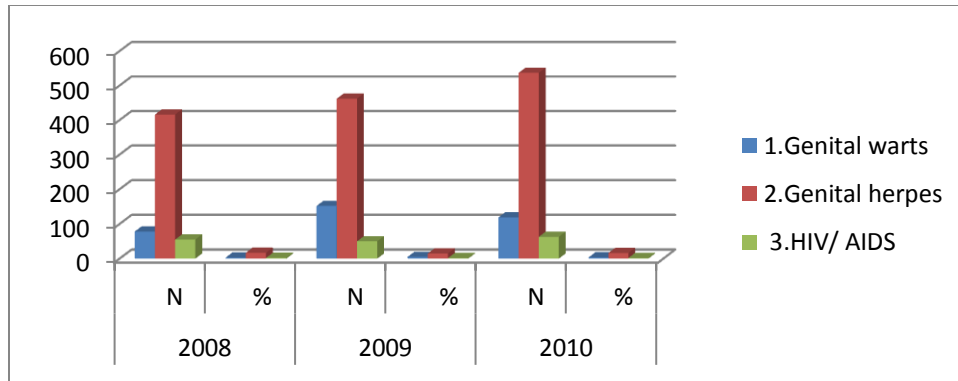


Figure 1: Number and percentage of different types of viral STDs during 2008, 2009 and 2010.

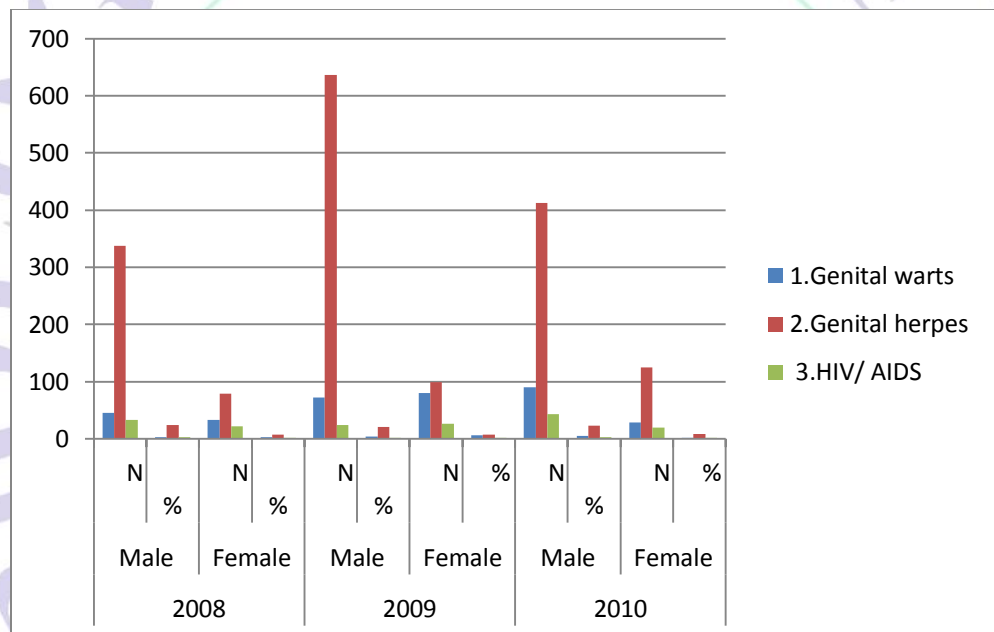


Figure 2: Number and percentage of different types of viral STDs among men and women during 2008-2010.

**Discussion**

Genital warts (HPV) infection is the commonest viral STD in the developing World, with an estimated 30 million new cases diagnosed annually worldwide. Approximately 15% of the general population harbor subclinical infection (Koutsky, 1997). CDC estimates that 24 million Americans are infected with HPV and 75000 new cases are diagnosed annually (Serveson, 2001). In India, incidence of genital warts ranges from 2% to 25.2% in STD clinic attendees. In Delhi, during 1955-61, a number of cases were reported. Similarly in Ahmedabad, slight

increase in the incidence of HPV infection was observed from 7.17% in 1993-94 to 9.1% in 1998-1999. However, in Chandigarh and Patiala, the incidence of genital warts has declined.

Genital warts' prevalence was second position among viral STDs and sixth position among different types of STDs for STD clinic attendees in Warangal (district). Prevalence of genital warts slightly increased from 2008 to 2010 and it was almost all similar in men (3.24%) and women (3.12%) in the year 2008. There was a marginal change in the prevalence



of this disease among men (4.93%) and women (2.03%) during 2010.

Genital herpes is the second most prevalent STD worldwide and the commonest cause of GUD in the developed World. There has been a constant increase, both in the incidence and prevalence of genital herpes from 1970 to 1985, the annual incidence of HSV infection increased from 4.6% per 1000 to 8.4 per 1000. In Europe, HSV prevalence has been reported to range 8% in pregnant women to 50% in homosexual men (Van Bentham, 2001). In UK, among the STD clinic attendees from 1995-1999, 62% of males and 77% of females were found to have HSV (Vyse, 2008). In India, there has been a significant increase in the proportion of viral STD especially HSV infection, with the incidence rates varying from 4.11% to 27.9% among STD clinic attendees in different regions of the country. In Pune, in 1994, 26% of GUD patients were diagnosed and in Nagpur, in 1998, 40.22% cases were recorded. In Chandigarh, the incidence rose from 11.4% in 1977-85 to 21% in 1995-1996. In Ahmedabad, the incidence increased from 8.23% in 1993-94 to 27.9% in 1998-99. The increasing incidence of genital herpes infection may be attributed to a decreased incidence of bacterial STD owing to their treatment at primary level and change in the pattern of sexual behavior. Prevalence of genital herpes was highest among viral STD and third position in all types of STDs who attended STD clinic at MGM hospital Warangal. Prevalence of this disease was more in males (24.29%) than in females (7.48%) and there was slight decrease from 2008 (17.03) to 2010 (16.52) in Warangal.

STD control programs especially aimed at heterosexually promiscuous subjects must be implemented to show the rapid spread of HIV infection (Zekeng *et al.*, 1992). Although 79.5% of seropositive patients were found to be infected with an STD, only 7.3% had genitourinary complaints. Many other parts of the developing world, including South Asia where the HIV epidemic is now spreading rapidly, are having high rates of STDs as both HIV and STDs are closely interlinked, early diagnosis, treatment and control of STDs offers a rational approach to the control of HIV. The percentage of prevalence of HIV/AIDS among STDs was recorded as 2.25 % (2008), 1.60 % (2009) and 1.93 % (2010). The decrease in the prevalence of HIV/AIDS may be due to setting of many ART centers and more awareness about the disease. Prevalence of HIV/AIDS was more

in males (2.37%) than in females (1.4%) in all the years of the study period.

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