

Original Research Article

A Cross-Sectional Study of Prevalence of Genital Herpes Infections in Middle Aged Women

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Abstract: The incidence of the HSV-2 infections is increasing nowadays. In addition to cause of morbidity, it is also a risk factor for human immunodeficiency virus (HIV) acquisition and transmission. Previous studies showed increased risk for HIV in patients with recent seroconversion to HSV-2. Thus HSV-2 infections may be a key factor of determinant of HIV incidence rates in the public and therefore HSV-2 infection detection and its management offers a prevention strategy for the HIV. Thus present study was planned to study the prevalence of genital herpes infections in middle aged womans. The study was conducted at the department of gynaecology at the SMBT institute of medical sciences, Dhamangaon, Ghoti, Nasik. The study was consisted of outpatient coming to the department of gynaecology and was done over a period of 1 year. Total 230 patients came to the OPD with a complaint of genital infections were taken into consideration. The participants taken for the study were of the age group of 21 to 40 years and were sexually active. Diagnostic testing was done using type-specific ELISA test to detect HSV-2 antibodies. Manufacturer's instructions were followed using an index value of 1.1 as positive HSV-2 specimen. Out of 230 females examined for the presence of genital infections, 132 (57.39%) were found to have HSV infection. From the present study, it can be concluded that among the genital infections, the incidence of genital herpes infections was high.

Keywords: Genital herpes; Herpes simplex virus; Sexually transmitted disease.

INTRODUCTION

Human herpes viruses had eight recognized types: herpes simplex virus type 1 (HSV-1), HSV-2, varicella-zoster virus, cytomegalovirus, Epstein-Barr virus, human herpesvirus 6 (associated with *Roseola infantum*), human herpesvirus 7 (associated with *Roseola infantum* and febrile convulsions), and human herpesvirus 8 (associated with Kaposi sarcoma and lymphomas) [1].

HSV is nowadays an important health concern as it is associated with epidemic of genital HSV and also acquisition of the HIV infections [2].

The present study was done to study the prevalence of genital herpes infections in middle aged women.

MATERIALS AND METHODS

The study was conducted at the department of gynaecology at the SMBT institute of medical sciences, Dhamangaon, Ghoti, Nasik. The study was consisted of outpatient coming to the department of gynaecology and was done over a period of 1 year. Total 230 patients came to the OPD with a complaint of genital infections were taken into consideration. The approval of the study was taken from the local ethical committee and informed consent was taken from each of the participant before start of the study. The participants taken for the study were of the age group of 21 to 40 years and were sexually active.

Diagnostic testing was done using type-specific ELISA test to detect HSV-2 antibodies. Manufacturer's instructions were followed using an index value of 1.1 as positive HSV-2 specimen. Gram stained vaginal smears were independently assessed for bacterial vaginosis (BV) with Nugent score 10 by 2

trained researchers. Vaginal swabs were cultured for *Trichomonas vaginalis*.

RESULTS

Out of 230 females examined for the presence of genital infections, 132 (57.39%) were found to have HSV infection. (Table 1, Figure 1) A total of 113

patients were from the age group of 21-30 years and 60 (53.97%) had genital herpes infections and 53 (46.90%) were not having genital herpes infections, but may had other types of infections. Similarly 117 females were from the age group of 31 to 40 year and out of these, 72 (61.53%) had genital herpes infections and 45 had other types of infections. (Table 2, Figure 2).

Table 1: Table showing presence of genital herpes infections out of the total number of females patients came with a complaint of infections at the genital area to the gynaecology department

Genital herpes infection	Number of female patients (n)
Present	132 (57.39%)
Absent	98 (42.60%)
Total	230

Table 2: Presence of genital herpes infections in age group of 21-30 and 31 – 40 years

Age of patient	Genital herpes infection present	Genital herpes infection absent	Total number of patients came with genital infections
21-30	60 (53.97%)	53 (46.90%)	113
31-40	72 (61.53%)	45 (38.46%)	117
Total	132	98	230

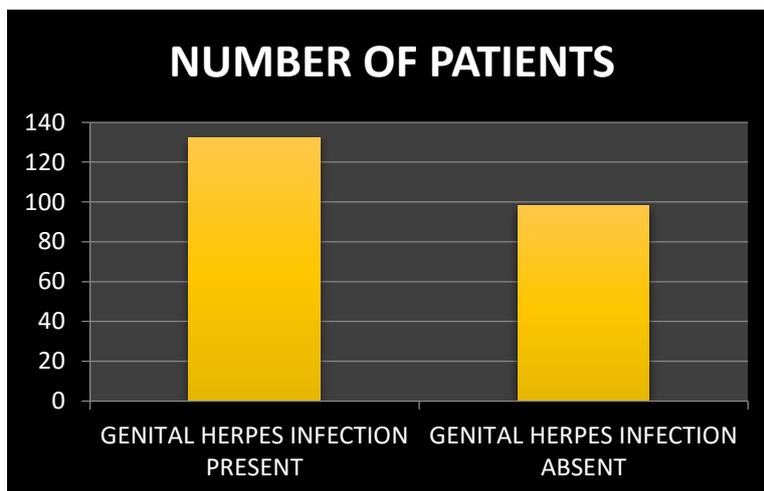


Fig-1: Genital herpes infections present or absent out of the total number of patients examined

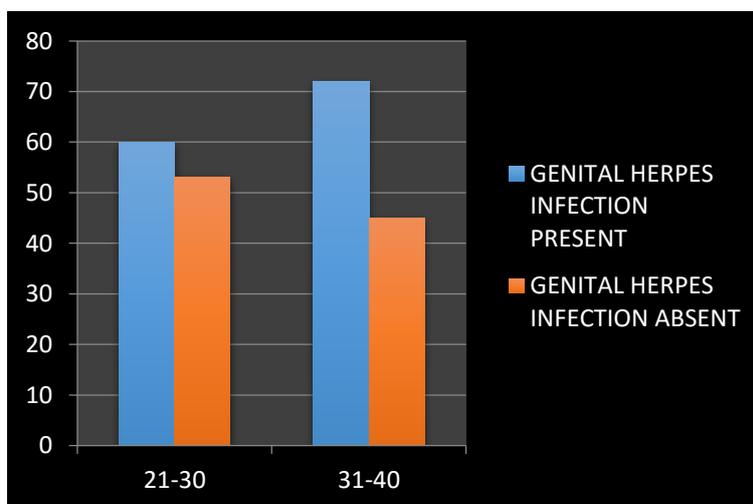


Fig-2: Number of patients examined and number of patients having herpes infections in specific age group

DISCUSSION

Lesions caused by the herpes virus were first documented by Hippocrates (460-377 B.C.E.), who called them “herpes,” a word derived from reptiles, as a reference to the formation of skin vesicles. The herpes simplex virus (HSV) is a DNA virus that belongs to the family Herpesviridae [3].

Genital herpes may be caused by herpes simplex virus type 1 (HSV-1) or herpes simplex virus type 2 (HSV-2). Both HSV-1 and HSV-2 infections may be associated with small vesicles, erosions, and shallow ulcers in the genital area. After the clinical course of the illness, the virus remains latent in certain nerve cells in the sacral ganglion, and causes repeated recurrence. HSV, which invades the skin and mucous membranes, may also cause keratitis, retinitis, encephalitis, encephalomyelitis, and even systemic infection in newborn babies or immunocompromised patients [4].

Viral infections mainly rubella, cytomegalovirus and herpes simplex virus (HSV) account for major part of maternal infections causing unfavourable outcome of pregnancy. HSV infections are among one of the most common infectious diseases in the humans. Primary infection of HSV acquired by women during pregnancy accounts for half of the morbidity and mortality among neonates; while the remaining half result from the reactivation of an old infection [5].

From 1960 to 1970, HSV-2 infection was considered a possible causative agent of cervical cancer. The role of HSV-2 in the development of cervical cancer has been questioned, since HSV-2 DNA was not found in cervical cancer biopsies¹². However, women with HSV-2 have a higher risk of developing cervical carcinoma, and therefore HSV-2 is considered as a cofactor in certain patients [3].

Herpes virus naturally can only infect humans. For infection initiation, HSV must come into direct contact with mucosal surfaces [6]. The type of HSV infection depends on the immunologic status of the infected person. Initial primary infection is manifested in persons without previously present serum antibodies against HSV. Initial non-primary infection is manifested in persons with pre-existing antibodies to HSV-1 or HSV-2 type and a new infection with the other HSV type. Recurrent infection occurs when there are pre-existing antibodies to the same type of HSV causing current infection [7].

The virus remains in a latent stage for the life of the host. Periodic reactivations of the virus and viral shedding occur in the presence of lesions or with mild or no symptoms. Persons with the latent virus are a

reservoir for virus shedding and transmission. Symptomatic recurrent infections are associated with a shorter duration of viral shedding and fewer lesions [8, 9].

HSV-2 is transmitted sexually by contact with infected genital secretions or mucocutaneous surfaces; acquisition is directly related to sexual activity. Most HSV-1 and -2 transmission, however, occurs during periods of asymptomatic shedding in the absence of recognized signs or symptoms of disease. Only a minority of persons who are HSV-2-seropositive have a history of symptomatic disease. Most patients (70%) are not aware of infection with genital HSV; with education, however, 50% can be taught to identify the clinical infection. Virtually all persons who have symptomatic primary genital HSV-2 will experience both symptomatic recurrence and asymptomatic shedding. All of the seropositive patients have latent infection and probably experience reactivation at least occasionally. Shedding occurs about 1 to 2% of any given days, but is higher in the few months after primary infection [2, 10, 11].

Genital herpes is a sexually transmitted disease. The re-emergence of this disease in Japan may be associated with the change in people's views on sex. The percentage of teenagers engaging in sexual encounters has been on the increase, and the prevalence of genital herpes has been increasing, especially in the youth. Unfortunately, most people with genital herpes do not have symptoms, and these people may transmit the infection to their sexual partners even without their own knowledge [4].

CONCLUSION

From the present study, it can be concluded that among the genital infections, the incidence of genital herpes infections was high. Awareness should be increased among the population to decrease the incidence.

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