

**CLINICO-EPIDEMIOLOGICAL PROFILE OF HERPES
PROGENITALIS PATIENTS ATTENDING STI/RTI CLINIC,
CIVIL HOSPITAL, AHMEDABAD, GUJARAT, INDIA**

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Abstract

Herpes progenitalis (Genital herpes) is one of the most widespread sexually transmitted viral diseases and the most common cause of mucosal erosions and ulcerations in the genital area. According to epidemiological data, the infection caused by genital herpes virus is common in developing countries. The number of sexually transmitted infections is increasing, and infections caused by herpes simplex virus 2 (HSV-2) in the genital area are becoming more frequent. In this study of 449 cases of Herpes Progenitalis, 337 were males (75.1%) while 112 were females (24.9%). In the present study Herpes progenitalis prevalence is very high in Ahmedabad e.g. Odhav (4.01%), Asarwa (3.79%), etc. Age group wise majority of the patients 208 belonged to the age group of 25-34 years (46.3%). In this study, out of 337 male patients, 132 (39.2%) had exposure with commercial female sex workers. Out of 112 female patients majority of them 54 (48.2%) strongly denied history of exposure related to outside marriage.

Key words: Genital herpes, HSV-1 & 2, Clinico-Epidemiology, CFSW

INTRODUCTION

Herpes progenitalis (or genital herpes) is a genital infection caused by the herpes (HSV-2). It is highly prevailing in human populations in many parts of the world and common source of genital ulcer disease universal. A 1998 study indicated, it was the common sexually by the number of cases ⁽¹⁾. Most individuals carrying herpes are unaware as they have been infected and many will never suffer an outbreak, which involves blisters similar to cold sores ⁽²⁾. While there is no cure for herpes, over time symptoms are increasingly mild

and outbreaks are decreasingly recurrent ⁽³⁾. HSV-2 is the most prevalent STIs in the world ⁽⁴⁾.

In India there has been a significant increase in the percentage of viral STDs especially HSV infection occurrence rates varying from 4.11% to 27.9% among STD clinic attendees in various regions of the country ^(5; 6; 7). In Ahmedabad, the incidence of herpes has increased from 8.23% in 1993-94 to 27.9% in 1998-99 ⁽⁸⁾. In a study by Risbud et al. ⁽⁹⁾ from Pune accounted 26% of patients having herpes etiology in patients. These are to similar studies of Narayanan ⁽¹⁰⁾ and Vora et al. ⁽¹¹⁾ also reported similar pattern of HP in 24.4% and 24.37 % of cases.

MATERIALS AND METHODS

A number of 449 patients were analyzed who attend the Sexually transmitted disease (STD) Clinic or Suraksha Clinic of Civil Hospital Ahmedabad having complaint of genital ulcers, genital discharge or genital growths were studied in detail. These patients were interviewed according to standard Proforma which contained details about the demography-age, sex, education, occupation, marital status, socioeconomic status, domicile of the patients and other details. This work also approved by Department Internal Human Ethical Committee (IHEC) project No: HEC-01.

Details were also taken regarding sexual activities of the patients i.e. heterosexual, bisexual, homosexual or other exposures. Information regarding the number of partners and whether they are of high risk activity (commercial sex workers and persons having multiple homosexual and heterosexual partners) was noted in detail. Information was also obtained regarding the last high risk exposure (Other than spouse or regular partner). The patients were also questioned about past history of genital ulcers, warts or discharges. Information regarding the personal history of the patient like history of alcohol or drug abuse, tobacco chewing, smoking or travelling job was taken into account. A detail clinical examination of the patient was done for various STDs like herpes progentialis, genital warts etc. Examination of the external genitalia, perianal and anal region, skin and oral mucosa were also done.

The patients were counselled with the help of counsellor appointed for STD clinic about the disease, its modes of acquisition, transmission, knowledge regarding safe sexual practices (condom usage), and information about abstinence of sexual activity until subsidence of the symptoms. These patients were also taught about the use of condoms and were also provided freely. The patients were persuaded to bring their partners on the follow up visit, so that they can also be clinically diagnosed and if necessary tested for STDs including HIV and also counselled.

RESULTS

In the this study of 449 cases of Herpes Progenitalis, 337 were males (75.1%) while 112 were females (24.9%) (Fig 1). In the present study Herpes progenitalis prevalence is very high in Ahmedabad e.g. Odhav (4.01%), Asarwa (3.79%), CTM (3.79%), etc. (Table 1). Age group wise majority of the patients 208 belonged to the age group of 25-34 years (46.3%) followed by 15-24 years (29.4%), 35-44 years (16.9%), 45-54 years (3.6%). A total of 12 patients were from the pediatric age group 0-14 years (2.7%) and 13 patients were in the age group of 55-64 years (0.4%) and rest were of 65 and above (0.7%) years (Fig 2).

In the present study most of the patients had completed their primary education (39.6%) followed by high school education (29.8%) and illiterate group (11.6%). Higher secondary education was completed by 10.5% of the cases and 7.1% were graduates and 1.3% were postgraduates (Fig 3). In this study, majority of the patients were Labourers (27.2%), followed by Service class (13.1%), Housewives (12.0%), unemployed (7.6%), etc. (Fig 4). Out of 449 cases of HP, 270 were married (60.13%), 162 were unmarried (36.08%), followed by Widow/Widower (1.78%), Staying away (0.89%), Divorced (0.67%) and Remarriage (0.45%) (Fig 5).

In this study, out of 337 male patients, 132 (39.2%) had exposure with commercial female sex workers. A total of, 72 (21.4%) were married, 56 (16.6%) were unmarried while 4 (1.2%) were either divorced, widowers, staying away or remarried. A total 67 males (19.9%) had exposure with known persons

(girlfriend or relative). Out of 67 males, 38 (11.3%) married had extramarital relations with a known person. A total 23 males (6.8%) had exposure with strange person. Out of these males, 8 (2.4%) were married and 14 (4.2%) were unmarried (Table 16, Fig 14). Seven males (1.8%) were homosexual and 25 (7.4%) were bisexual. A total 4 males (1.2%) were multiple exposures (HM+HT) (Fig 6).

Out of 112 female patients majority of them 54 (48.2%) strongly denied history of exposure related to outside marriage. Twenty nine females reported of having exposed from infected spouse (25.9%). 19 females reported of having exposure with known person (17%) and 8 females reported of exposure with CFSW through clients (7.1%). In the present study 2 (1.8%) were abused forcefully (Fig 7).

DISCUSSION

In the recent years there has been an increase in the number of cases of Herpes Progenitalis in both developed and developing countries. It topped the list of 47.66% (449) of cases which is similar to the Dharmishtha et al. ⁽¹²⁾ who also reported 43.33% cases in their study. Same results were also documented by Vora et al. ⁽¹¹⁾ in their survey. Burzin et al. ⁽¹³⁾ also had same results in their investigation. They analysed 150 patients having this viral infection.

In Ahmedabad, the incidence of herpes has increased from 8.23% in 1993-94 to 27.9% in 1998-99 (Arora et al., 2002). In a study by Risbud et al. ⁽⁹⁾ from Pune accounted 26% of patients having herpes etiology. Narayanan ⁽¹⁰⁾ reported similar pattern of HP (24.4%). With respect to gender, males were 75.1% while females were 24.9%. Similar data were reported by Chetna et al. ⁽¹⁴⁾ where they documented 37.2% males and 15.3% females. This is also in accordance to the study by Shilpee et al. ⁽¹⁵⁾ from New Delhi who found 45% of HP in females and males constituted only 19% only. Our demographic report showed that Herpes progenitalis prevalence varied in Ahmedabad locally e.g. Odhav (4.01%), Asarwa (3.79%), CTM (3.79%), Amraiwadi (3.3%), Narol (3.12%), etc.

Age group wise majority of the patients (208) belonged to the age group of 25-34 years (46.3%) followed by 15-24 years (29.4%), 35-44 years (16.9%) and 45-54 years (3.6%). A total of 12 patients were from the pediatric age group 0-14 years (2.7%) and 13 patients were in the age group of 55-64 years (0.4%) and rest were of 65 and above (0.7%) years. Burzin et al. ⁽¹³⁾ from Ahmedabad also obtained high percent of HP in pediatric group in support of our data. Most of the patients had completed their only primary education (39.6%) followed by high school education (29.8%) and illiterate group (11.6%). Higher secondary education was completed by 10.5% of the cases and 7.1% were graduates and 1.3% were postgraduates. It revealed in addition to age and education is a barrier for high prevalence of this viral disease due to non-awareness probably. Most of the patients were labourers (27.2%), followed by Service class (13.1%), Housewives (12.0%), unemployed (7.6%), etc.

In gender wise study, out of 337 male patients, 132 (39.2%) had exposure with commercial female sex workers. A total of 72 (21.4%) were married, 56 (16.6%) were unmarried while 4 (1.2%) were either divorced, widowers, staying away or remarried. A total 67 males (19.9%) had exposure with known persons (girlfriend or relative). Out of 67 males, 38 (11.3%) married had extramarital relations with a known person. A total 23 males (6.8%) had an exposure with strange person. Out of these males, 8 (2.4%) were married and 14 (4.2%) were unmarried. Seven males (1.8%) were homosexual and 25 (7.4%) were bisexual. Four males (1.2%) were multiple exposures (HM+HT). A total 77 males (22.8%) had an exposure with spouse only. Out of these cases, 48 (14.2%) were married and 28 (8.3%) were unmarried, while 1 (0.3%) was abused forcefully.

Out of 112 female patients, majority of them 54 (48.2%) strongly denied history of exposure related to outside marriage. Twenty nine females reported of having exposed from infected spouse (25.9%). 19 females reported of having exposure with known person (17%) and 8 females reported of exposure with CFSWs through clients (7.1%). In the present study 2 (1.8%) were abused. The study thus indicates that patients had various modes of contacts responsible for this type of disease in addition to other social factors. Concentrating on this

particular STD, HP, the pattern of prevalence in high is Odhav, Kheda and Rajasthan i.e. Ahmedabad/its vicinity in this study, as compared to total STDs infected areas. Other factors like sex ratio, marital status and socio-economic factors revealed no significant changes.

CONCLUSIONS

Thus, our 4 years study revealed that demographic survey changes depending on the type of STD infection from place to place, of Ahmedabad and its vicinity who attend our clinic. Males were more affected than the opposite sex. The clinico-socio-economic profiles include illiteracy, low education, marital status, prostitutes, lack of knowledge about disease/health, age etc are led to herpes progenitalis in Gujarat including India and around the globe. Many other factors play a part in the successful controls of herpes progenitalis, including availability of effective and affordable drugs, accessible and acceptable health services, training and supervision of health care workers.

ACKNOWLEDGEMENT

Sincere thanks to Maulana Azad National Fellowship (MANF), University Grants Commission (UGC), New Delhi for the financial support to this research work.

REFERENCES

1. **Antonio C.G., Jane T.R. and Thierry E.M. 1998.** Global epidemiology of sexually transmitted diseases, *Lancet*. 352; S2-S4.
2. **Malkin J.E. 2004.** Epidemiology of genital herpes simplex virus infection in developed countries. *Herpes*, 1; 2A-23A.
3. **David M. K., Jacqueline B., Andria L. and Lawrence C. 1992.** Asymptomatic Reactivation of Herpes Simplex Virus in Women after the First Episode of Genital Herpes. *Annals of Internal Medicine* 116 (6); 433-437.

4. **Smith J. S. and Robinson N. J. 2002.** Age-specific prevalence of infection with herpes simplex virus types 2 and 1: a global review. *J Infect Dis*; 186(Suppl 1); S3e28.
5. **Jaiswal A. K. and Singh G. 1998.** Pattern of Sexually transmitted diseases in Jammu and Kashmir region of India. *Indian J Sex Transm Dis.*, 19(2); 113-115.
6. **Aggarwal A., Jain V. K. and Brahma D. 2002.** Trends of STDs at Rohtak. *Indian J Sex Transm Dis.*, 23(1);19-21.
7. **Muruges S., Sugareddy B. and Raghunath S. 2004.** Pattern of Sexually transmitted diseases at Davangere. *Indian. J. Sex. Transm. Dis.*, 25 (1); 9-12.
8. **Arora R., Rawal R.C. and Bilimoria F.E. 2002.** Changing pattern of STDs & HIV prevalence among them at five-year interval. *Indian J Sex Transm Dis.*, 23(1); 22-25.
9. **Risbud A., Chan-Tack K., Gadkari D. Gangakhedkar R.R., Shepherd M.E., Bollinger R. Mehendale S., Gaydos C., Divekar A., Rompalo A. and Quinn T.C.1999.** The etiology of genital ulcer disease by multiplex polymerase chain reaction and relationship to HIV infection among patients attending sexually transmitted disease clinics in Pune. India. *Sex. Transm. Infections.*, 26; 55-62.
10. **Narayanan B. 2005.** A retrospective study of pattern of sexually transmitted diseases during a ten-year period. *Ind. J. Dermatol. Venerol. Leprol.*, 71(5); 333-337.
11. **Vora R., Gopalkrishnan A., Chirag D. and Rajat G. 2011.** Clinico-epidemiological study of sexually transmitted infections in males at a rural based tertiary care center. *Indian. J. Sex. Transm. Dis.*, 32; 86-9.
12. **Dharmishtha T.G., Shrimali G., Khandelwal N., Parmar R. and Padmaraj R. 2012.** Trends of Different Sexually Transmitted Diseases In A Std Clinic Of A Tertiary Care Hospital: Comparison Between Viral

Origin And Bacterial Origin STDs. National Journal of Medical Research, 2(3); 358-361.

13. **Burzin K.B., Parmar K. S., Rao M.V. and Bilimoria F.E. 2007.** Profile of sexually transmitted diseases in pediatric patients. Indian J. Sex. Transm. Dis.; 28:76-8.
14. **Chetna A., Bharat M. and Malik J.S. 2006.** Study of STD pattern and its associated risk factors-A hospital study. J. Commun. Dis. 38(1); 70-73.
15. **Shilpee C., Ramachandran V.G., Shukla D., Bhattacharya S.N. and Narendra S. M. 2010.** Pattern of sexually transmitted infections and performance of syndromic management against etiological diagnosis in patients attending the sexually transmitted infection clinic of a tertiary care hospital. Indian. J. Sex. Transm. Dis. 31; 104-08.

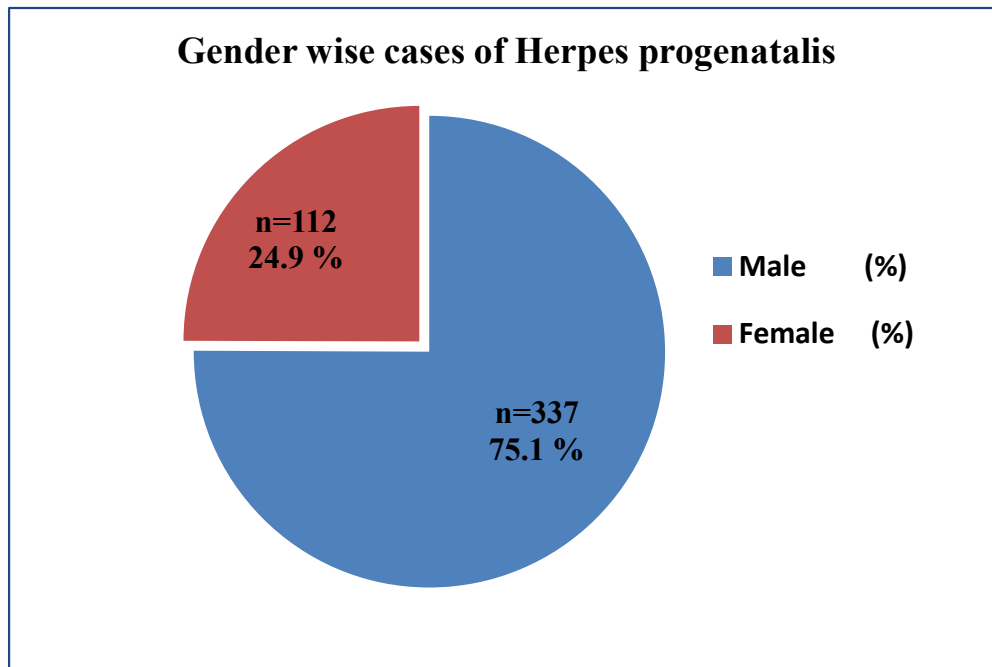


Fig 1: Gender wise cases of Herpes progenatalis

Table 1: Herpes progenitalis cases in population of Ahmedabad / Gujarat and its vicinity

Sr. No.	Area	Total no. of case	Percentage (%)
01	Kalapinagar	14	3.12
02	Vadaj	8	1.78
03	CTM	17	3.79
04	Rakhiyal	1	0.22
05	Asarwa	17	3.79
06	Civil	11	2.45
07	Dillidarwaja	7	1.56
08	Vastral	0	0.00
09	Amraiwadi	15	3.34
10	Odhav	18	4.01
11	Vatva	9	2.00
12	Meghaninagar	1	0.22
13	Sarkhej	5	1.11
14	Laldarwaja/Shahpur	6	1.34
15	Sardar nagar	8	1.78
16	Chandkheda	1	0.22
17	Juhapura/Vejalpur	5	1.11
18	Sabarmati	1	0.22
19	Chamanpura	10	2.23
20	Bapunagar	11	2.45
21	Gomtipur	6	1.34
22	Prahladnagar	1	0.22
23	Paldi	4	0.89
24	shahibag	9	2.00
25	Memco	9	2.00
26	Chandlodiya	7	1.56
27	Saraspur	8	1.78
28	Naroda	9	2.00
29	Ambawadi	4	0.89

30	Saijpur bogha	9	2.00
31	Jivraj park	1	0.22
32	Ishanpur	6	1.34
33	Kubernagar	0	0.00
34	Gatlodiya	6	1.34
35	Thakkar nagar	11	2.45
36	Kathwada	4	0.89
37	Narol	14	3.12
38	Gandhinagar	12	2.67
39	Kalol	0	0.00
40	Mansha	5	1.11
41	Dehgam	10	2.23
42	Mehsana	4	0.89
43	Kalol	10	2.23
44	Sabarkantha	9	2.00
45	Banashakantha	8	1.78
46	Vadodara	7	1.56
47	Amreli	8	1.78
48	Junagadh	1	0.22
49	Surat	4	0.89
50	Kheda	13	2.90
51	Daskroi	7	1.56
52	Rajasthan	18	4.01
53	Madhya Pradesh	6	1.34
54	Uttar Pradesh	6	1.34
55	Traveller	48	10.69
Total		449	100

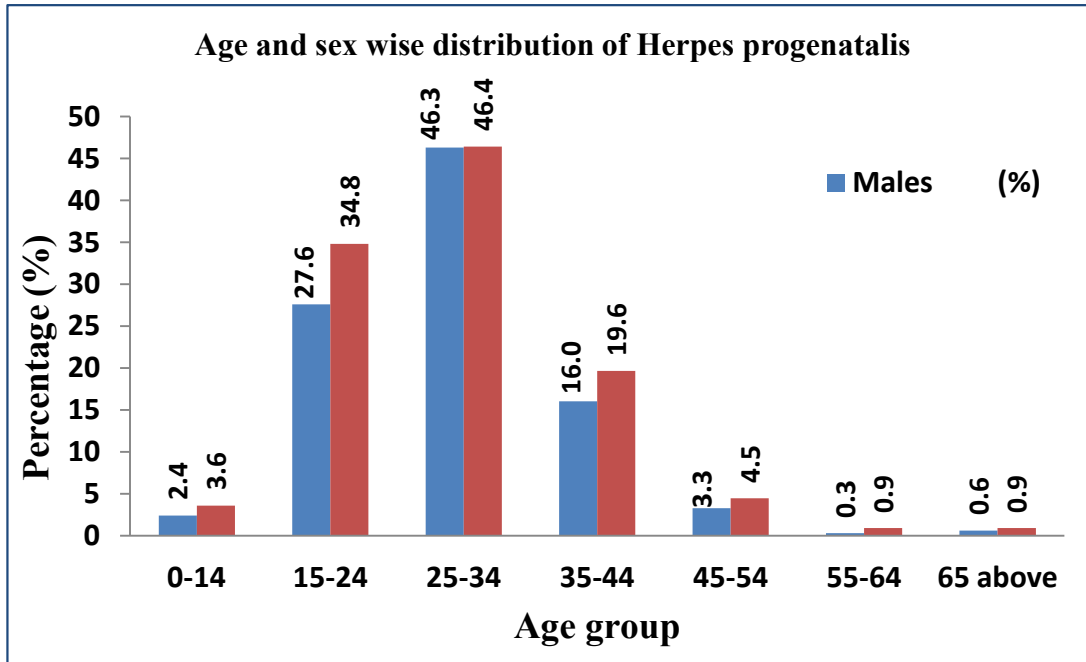


Fig 2: Age and sex wise distribution of Herpes progenitalis

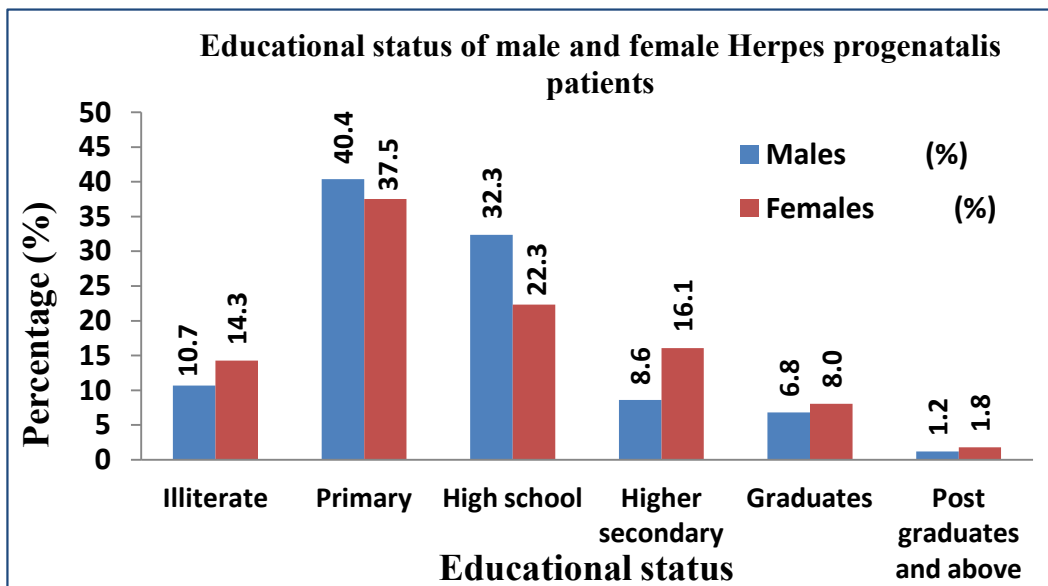


Fig 3: Educational status of male and female Herpes progenitalis patients

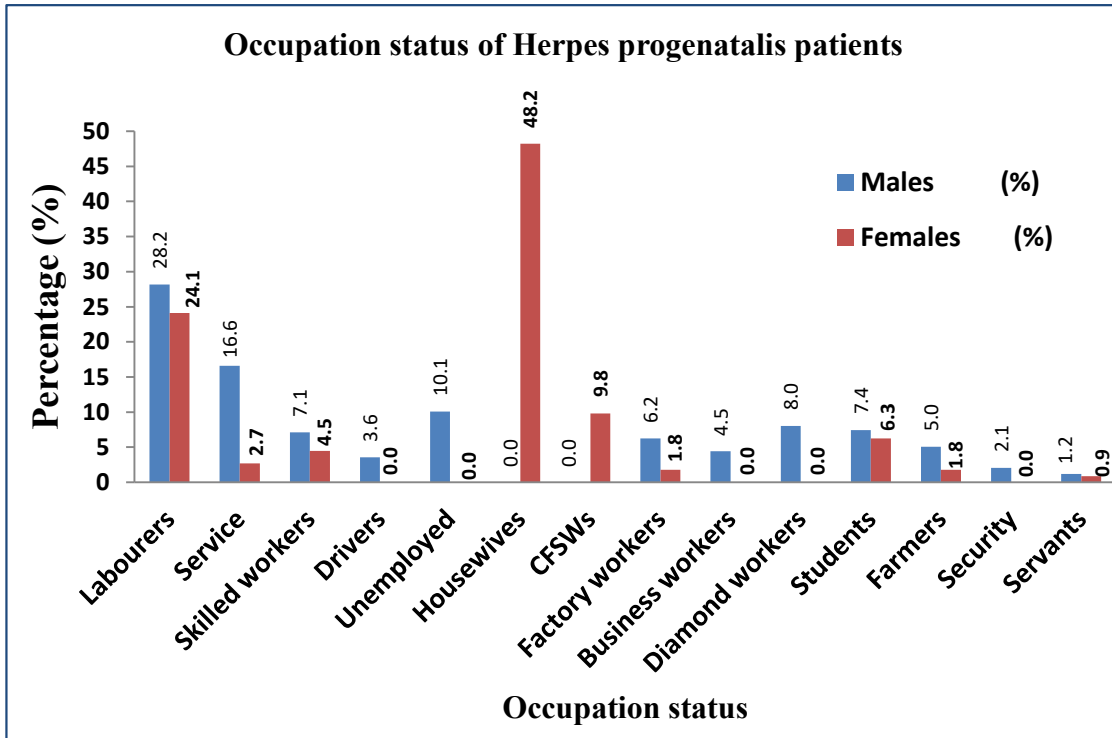


Fig 4: Occupation status of Herpes progenatalis patients

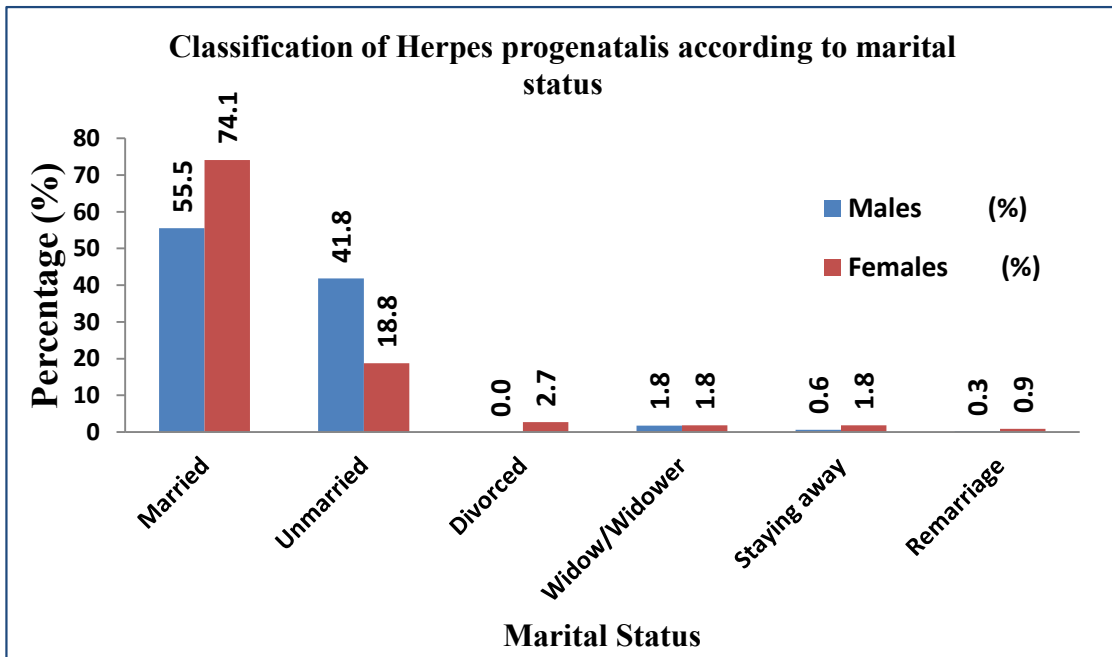


Fig 5: Classification of Herpes progenatalis according to marital status

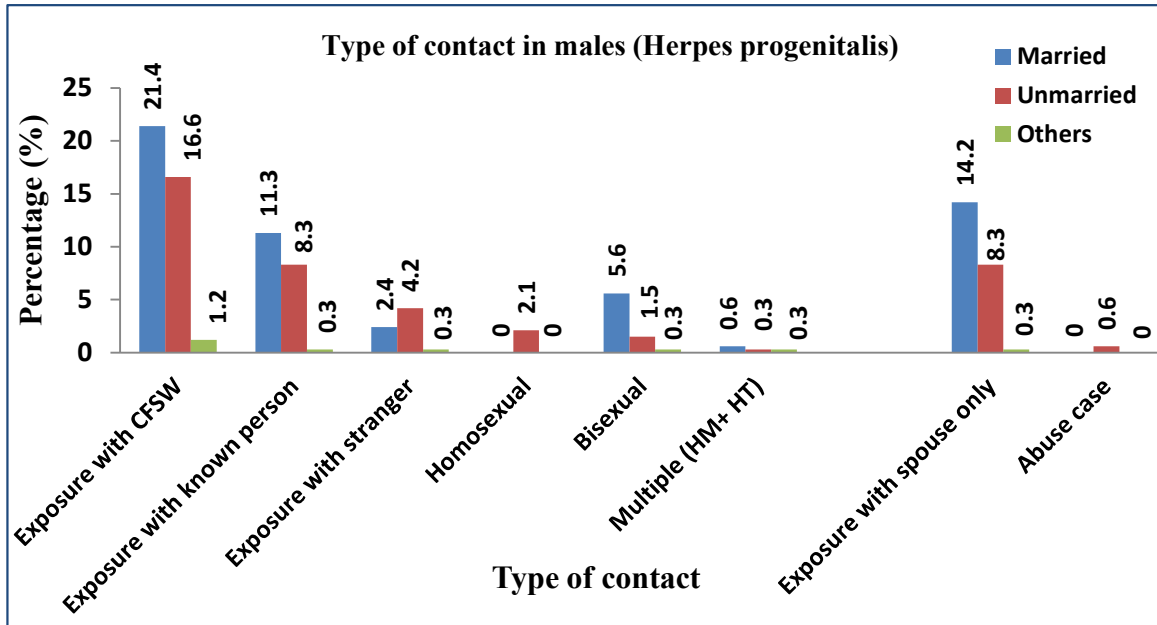


Fig 6: Type of contact in males (Herpes progenitalis)

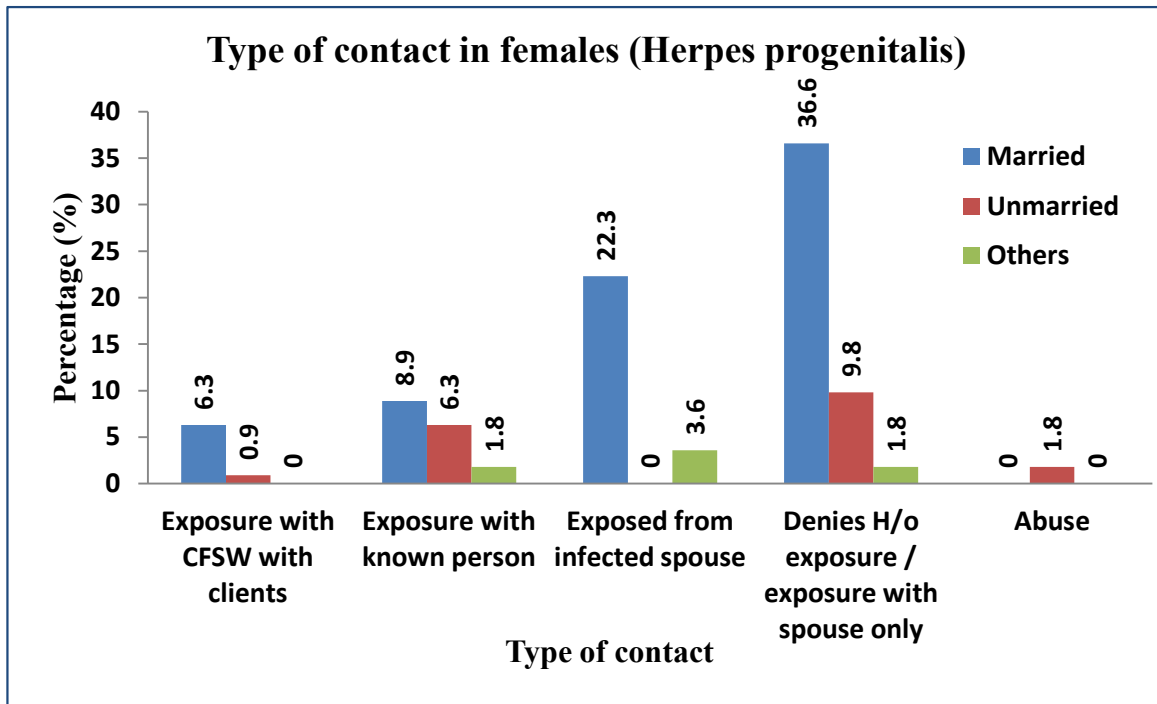


Fig 7: Type of contact in females (Herpes progenitalis)

