

Original Research Article

Knowledge and awareness about herpes labialis among dental clinical students: a survey

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ABSTRACT

Background: Herpes virus (HSV) is a worldwide healthcare problem. Dental health care professionals are at a high risk of infection by HSV. The present study investigated the knowledge and awareness of HSV infection among dental Interns in dental colleges.

Methods: This was a questionnaire-based cross-sectional study. A self-administered questionnaire consisting of questions on students' knowledge and awareness regarding HSV was used. Data of 126 participants were analysed using SPSS (Statistical Package for Social Studies) version 22.0.

Results: Overall, the participants showed only a fair level of knowledge about HSV. As the respondents of the study were clinical dental students, it was expected to have a high level of awareness.

Conclusions: These unsatisfactory findings emphasize the necessity of continued education about HSV in order to improve knowledge and awareness of dental students regarding HSV.

Keywords: Awareness, Cold sore, Dental students, Herpes, HSV

INTRODUCTION

Herpes simplex is a relatively common viral infection. It has been hypothesized that approximately one-third of the world's population has experienced symptomatic HSV-1 at some point throughout his or her lifetime.¹ There are two types of herpes simplex virus, type 1 and type 2 (HSV1 and HSV2). Herpetic lesions (HSV1) are present on the skin or mucous membranes (the thin moist lining of many parts of the body such as the nose, mouth, throat and genitals). Most blisters appear on the lips or around the mouth. Sometimes, blisters may appear on the tongue, gingiva or anywhere on the skin. The first time sores appear, they will show up between 2 and 20 days after a person has contacted with an infected person. These sores can last from 7 to 10 days. In case of oral herpes (HSV-1), blisters may be associated with flu-like

symptoms like fever, muscle aches, or swollen lymph nodes (glands) in the neck are possible. Appearance of the blisters is often preceded by tingling, itching and pain at the site.

During infective period an infected person can infect others and spread of infection is most likely when a moist blister is present. However, people with a history of cold sores may shed the virus in their saliva and are therefore capable of infecting others even without a blister being present.² As the virus may spread by contact with infected saliva, it is of great concern for the dentist.

Although the final diagnosis of herpes can be established after microscopic confirmation by scraping the base of the cold sore and examining cells under the microscope, by growing the virus, or by a PCR (polymerase chain

reaction) test in a pathology laboratory, dental students should be able to make provisional diagnosis before rendering the dental treatment.³

The literature includes reports of herpes whitlow and herpes keratitis in dental health care providers after treating patients with active herpes lesions, in the absence of proper infection control practices.^{4,5} Although barrier protection methods are the most reliable manner of preventing herpes infection, these do not completely eliminate the risk of transmission.

So this study was conducted to assess the awareness and knowledge about herpes (HSV I) infection in among dental students.

METHODS

The survey was cross-sectional held in July 2018. 126 clinical interns from Subharti Dental College participated in the survey. Only those interns, who passed their BDS final year in first attempt, were included in the study. Interns who passed their BDS final year in more than one attempt were excluded from the study. Data were collected by questionnaire that assessed participant’s knowledge about oral herpes simplex signs/symptoms, transmission, management and control. The questionnaire consisted of 24 short questions divided into four parts. The first part screened the demographic profile of students including, age, gender, and academic level. The second part assessed the knowledge of those students regarding oral herpes infection and routes of transmission. The third part investigated the behaviour and attitude towards oral herpes infection and infected patients. The last part examined the practices of students regarding protection measures against herpes simplex. Students were asked to fill out the anonymous self-administered questionnaire.

Once the students had answered the questionnaires, the responses were accounted for and analysed using SPSS version and results were obtained.

RESULTS

126 questionnaires were distributed to the dental interns. Female students represented 99 (78.4%) of the sample, rest 27 (21.6%) were male. Results were analysed using SPSS 21. The data was tabulated and displayed in Table 1 and as pie diagrams respectively for each query asked. The results showed that 84% interns know that herpes infection is transmissible (Figure 1) and 84% interns know that herpes infection may spread through direct contact (Figure 2). All the interns were aware of the viral origin of the herpetic infection but only 67% interns were aware about the latency of the virus in the body. 74% interns knew that any kind of stress like physical, mental or emotional may precipitate reoccurrence (Figure 4). 73% interns were able to make differential diagnosis of herpetic lesion (Figure 5). 53% interns were aware about

systemic symptoms associated with herpetic infection (Figure 6).

Table 1: Showing results of questionnaire.

Question	Yes (%)	No (%)	Not aware (%)
Is herpes transmissible	106 (84)	9 (7)	11 (9)
Herpes spread through direct contact	106 (84)	18 (14)	2 (2)
Herpes spread through saliva	76 (60)	27 (22)	23 (18)
Herpes may reoccur by stress	93 (74)	21 (17)	11 (9)
Can identify herpes lesion	92 (73)	34 (27)	–

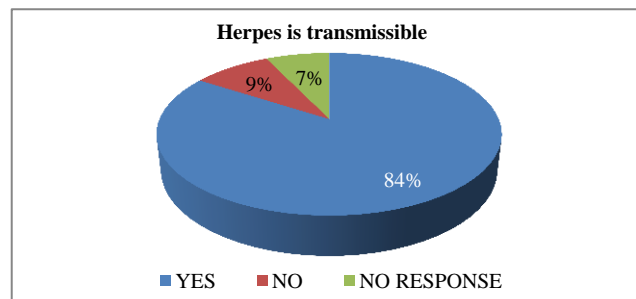


Figure 1: Knowledge about transmission of herpes.

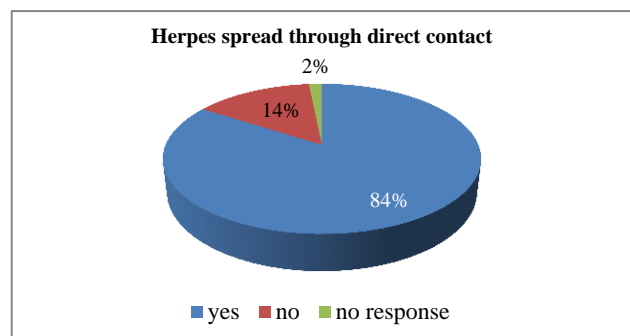


Figure 2: Knowledge about spread of herpes infection through direct contact.

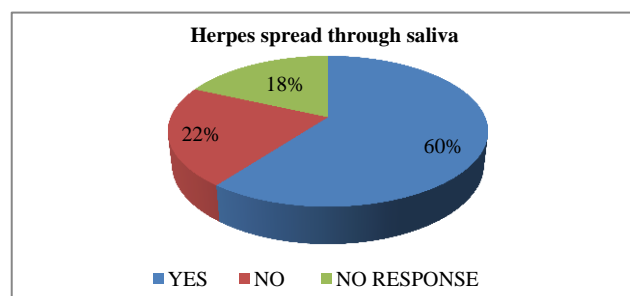


Figure 3: Knowledge about spread of herpes infection through saliva.

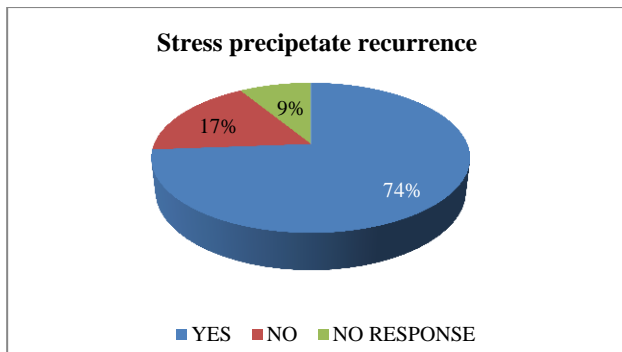


Figure 4: Awareness about stress factor for precipitation of recurrence.

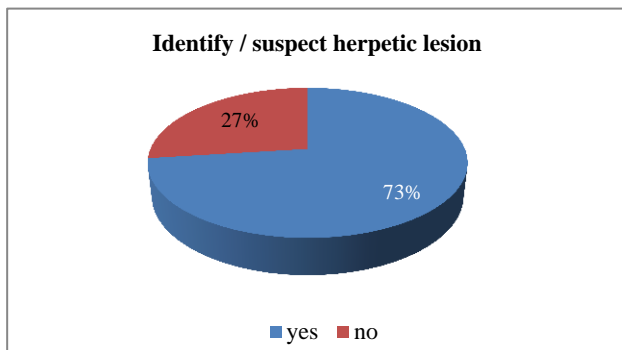


Figure 5: Knowledge to identify/suspect lesion.

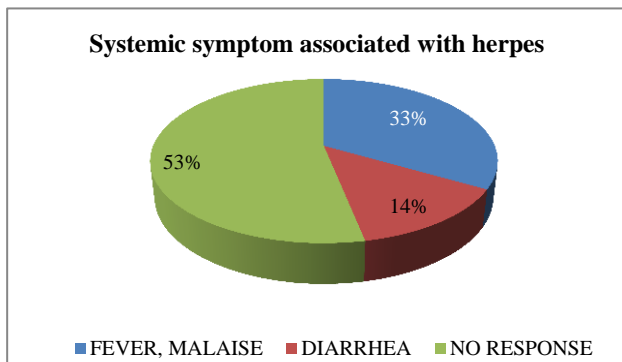


Figure 6: Knowledge about systemic symptoms associated with herpes infection.

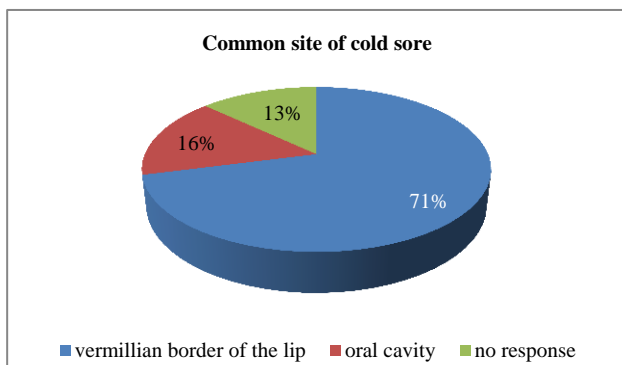


Figure 7: Knowledge about common site of cold sore.

DISCUSSION

Delivery of oral health care is the fundamental responsibility of dentists. However, these professionals are at risk for infections caused by various microorganisms such as mycobacterium tuberculosis, HBV and HCV, staphylococci, streptococci, HSV type 1, HIV, mumps, influenza, and rubella.^{6,7} Herpes viruses shed in saliva can cause persistent infections in most exposed individuals, thus making such exposure a concern in dentistry.²

The herpes simplex virus is a contagious virus that can be passed from person to person through direct contact. Even, an adult does not have to have sores to spread the virus. Most people, however, get herpes simplex from an infected person who does not have sores. Doctors call this “asymptomatic viral shedding.” Herpetic whitlow is the infection of the finger and thumb of the hand with herpes virus. Herpetic whitlow may spread in medical/dental professionals through patient’s saliva.²

Health professionals specially dentists are exposed to blood, saliva and even are in direct contact with the skin and mucosa of the patient in head and neck region which put them at a higher risk of getting infections from the patients. Thus to reduce or prevent the transmission of microorganisms to dental health care workers, not only the strict adherence to infection control guidelines but awareness about the infectious disease is a must.⁸

There are more studies done regarding knowledge and awareness of dental students towards infectious diseases like hepatitis, tuberculosis etc.⁹ studies on herpes labialis have been predominantly among non-health care workers, and the few studies in health care workers have involved non-dental health care workers. To our literature search, only two studies have been conducted about the knowledge, attitudes and professional behaviours in relation to herpes labialis among dental students and dental hygiene students at different academic levels.¹⁰

This study was conducted to assess the level of knowledge, attitudes, and practice among dental interns regarding HSV infection. Overall, dental students in the present study showed only a fair level of knowledge regarding HSV infection.

Although, overall correct response varied greatly among all the interns. All the interns had only fair knowledge about herpes infection. Out of 126, interns 106 (84%) knew that herpes infection is transmissible and can spread to dentist during treatment whereas 11 (9%) interns believe that herpes infection is not transmissible (Figure 1). 106 interns (84%) know that herpes infection may spread through direct contact, whereas 18 interns (14%) disagree with the spread through direct contact (Figure 2). It shows that most of the interns are aware of transmission of herpes infection through direct contact but only few interns are aware of its transmission though

saliva (Figure 1-3). All the interns were aware of the viral origin of the herpetic infection but only 84 interns (67%) answered that virus remain latent in the body. This shows that all the interns are not aware of latency of the virus in the body and may shed virus in the saliva even when lesion is not present. 93 interns (74%) knew that any kind of stress like physical, mental or emotional stress may precipitate reoccurrence (Figure 4). 92 interns (73%) were able to make differential diagnosis of herpetic lesion, whereas 34 interns (27%) had no idea about how herpetic lesion looks like (Figure 5). As all the interns were not able to identify the lesion, they are at risk of getting infection from the infected patient. Regarding gender, there were significant differences between males and females in most of the answered knowledge items as significantly more females answered correctly than their male counterparts.

As the respondents of the study were clinical dental students, it was expected to have a high level of knowledge and awareness towards infectious diseases. Although among infectious diseases more stress is given on HBS and HIV but infectious diseases like herpes also should be stressed.

CONCLUSIONS

Data from this study revealed a high level of inadequate knowledge and awareness regarding herpes labialis. The adequate academic training of dental students implies future responsible work. This questionnaire was made to address the herpes infection (HSV) in dental practice, hoping to spread awareness among dental students to prevent its spread. It is absolutely necessary to protect ourselves and the health of our patients.

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Ethical approval: The study was approved by the Institutional Ethics Committee

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