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Fever blisters-insights into mass population about herpes labialis infection

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Abstract
Introduction: Recurrent herpes labialis commonly known as Fever blisters is a significant health and social concern affecting a majority of adults. However, there is a notable lack of knowledge and awareness about Herpes Labialis among mass population. This study aimed to assess the knowledge and awareness about the manifestation, risk factors and management of Herpes Labialis infection among mass population.
Methods: A random general population was selected in this retrospective study. Demographic data, risk factors (fever, stress, menstruation, URTI), lifetime experience of herpes labialis and management taken in past were obtained using a Google formatted questionnaire. Statistical analysis was performed with 0.05 considered significant.
Results: The majority of patients (78%) were aged 20-30, with a female predominance (male: female ratio of 58.1:41.9). Fever (19%) was the most common risk factor, followed by stress (11.8%). Most patients experienced atleast one episode of Recurrent Herpes Labialis (42.7%) once in their lifetime. The upper lip was the most common location, with the right side (35%) slightly more affected than the left (21.5%).
Conclusion: This survey sheds valuable light on the knowledge and awareness associated with Recurrent Herpes Labialis. The emotional impact of this condition, often leading to feelings of embarrassment, underscores the need for effective prevention and management strategies. This survey serves as a crucial step towards a better understanding of knowledge about risk factors and the Management by the affected individuals.

Keywords: Cold sores, fever blisters, lip, recurrent herpes labialis

Introduction

HSV infection can lead to a spectrum of human diseases, varying from mild, localized cases in the general population to potentially life-threatening infections in individuals with compromised immune systems [1]. Humans are the primary reservoirs for these infections, making them some of the most commonly encountered infections worldwide, as they do not rely on vectors for transmission. While both orofacial and pubic areas can be affected by these viruses, HSV-1 tends to be more prevalent in the orofacial region, whereas HSV-2 is commonly found in the pubic region [2].

Fever blister are generally dismissed by mass population and laymen as atrivial affliction unworthy of consideration [3]. Cold sores or fever blisters scientifically known as Herpes Labialis, are caused by the herpes simplex virus (HSV) and typically manifest as small, fluid-filled blisters on or around the lips. These short-lived sores can be not only physically uncomfortable but also emotionally distressing due to their visible nature. They can impact various aspects of one's life, including self-esteem, social interactions, and overall well-being. Additionally, the stigma associated with herpes simplex virus infections can create additional challenges for those affected.

The impact of herpes labialis infection can indeed vary significantly from one individual to another. Some people experience infrequent and relatively minor outbreaks, while others may have frequent and more severe episodes. The infection location on the face can also lead to social stigmatization. The primary infection with (HSV 1) is usually observed in children, teenagers and adult. Risk factors such as menstruation, fever, stress, sunlight and upper respiratory tract infections reactivate the virus, which attacks the epithelial cells of oral mucosa through the sensory nerve causing relapse of infection [4].

Recognizing herpes simplex infection promptly and initiating early therapy are crucial aspects of managing the disease. Prompt application of topical or oral antiviral treatment can significantly reduce the severity and duration of herpetic episodes, ultimately aiding in the prevention of recurrent herpes labialis [2].

This survey has been meticulously designed to explore various facets of cold sores, encompassing their prevalence across different demographics, potential triggers, the range of symptoms experienced, and the array of strategies individuals employ to manage and mitigate their effects. The overarching goal is to accumulate a wealth of information that will not only broaden the collective understanding of this common condition but also provide valuable insights for those grappling with cold sores or seeking to enhance their knowledge about them.

Methodology

A survey on knowledge and awareness about herpes labialis was conducted in Pune city among the mass population. An online questionnaire format was designed to access

knowledge, awareness and practice regarding herpes labialis infection. The study duration was 1 month.

The survey consisted of 36 multiple choice questions and a few open ended questions and distributed randomly to all the participants. The questionnaire validity was found to be 0.785 which was found to be satisfactory. Reliability of questionnaire was done using Cronbach alpha value which was found to be 0.741 (i.e satisfactory to good). The calculated sample size was 246.

The survey was designed to be easily accessible and user-friendly, with clear instructions and concise questions in English language. It was estimated to take approximately 4-5 minutes to complete. A total of 246 individuals who were selected at random from different regions of Pune city.

The questionnaire included questions related to demographic details such as age, gender, general knowledge about herpes labialis, such as its causes, symptoms, risk factors and appearance. It also explored participants; awareness of preventive measures, common misconceptions, and the impact of herpes labialis on individuals daily lives.

Data collected from the survey will be analyzed using statistical software to identify trends, patterns, and gaps in knowledge and awareness among different demographic groups. The findings will be presented in aggregated form, ensuring the anonymity of all participants.

It is important to note that participation in this survey was voluntary, and participants have the right to withdraw at any time without providing a reason. All responses will be kept confidential and used solely for research purpose.

Results

There were total 246 participants, only 105 participants encountered Recurrent Herpes Labialis, accounting for 42.7% prevalence rate of Recurrent Herpes Labialis in our study. The majority of the patient's were in the age group of 20-30 years of age. Further, this was more common in females than males indicating female predominance (male: female=58.1:41.9). [Fig 1]

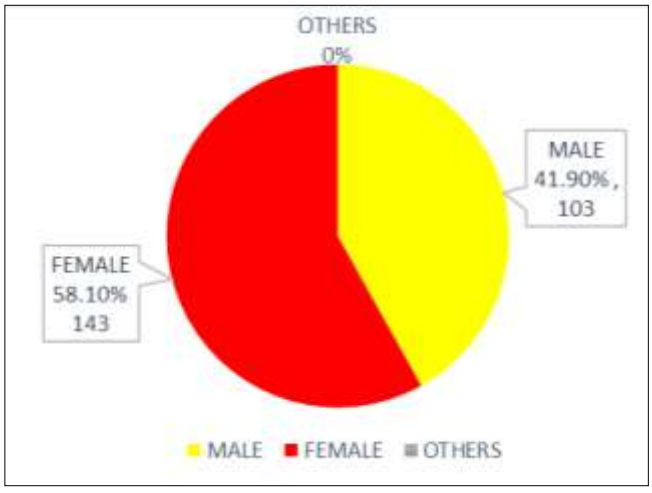

Fig 1: Gender distribution of study participants.

34.1% of the individuals surveyed were found to label the rash as viral infection whereas 333% labelled it as internal fever. Table 2 presents the rash described by the participants according to their knowledge. Almost 54.5% were aware that this is a contagious disease and 67.1% know this infection may reoccur.81.7% take preventive measures to control further spread of infection. A total of 26% experienced herpes labialis in last 12 months while21.5% experienced a year before. 22.4% participants were infected with herpes labialis once while 14.6% were infected 2-3 times and 8.9% were infected more than thrice.

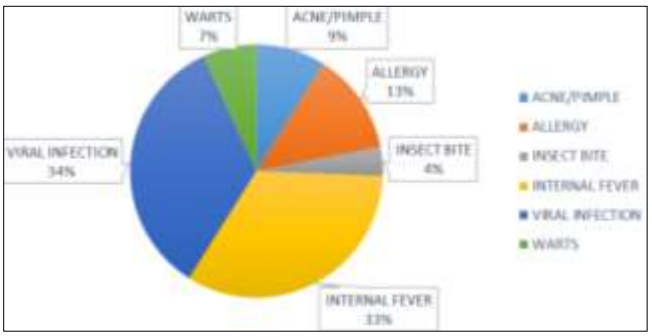

Fig 2: Participants identifying Herpes Labialis condition.

The most commonly occurring location for Herpes Labialis Infection was upper lip especially right side followed by left side, lower right side and midline under the nose. Fig 3 presents the location of occurrence of recurrent herpes labialis among the participnts. 82.1% participants marked this infection as fluid filled blister and 30.5% of the individuals reported ulceration of the blister. The participants reported more than one perceived trigger factors and the most common trigger factors reported were fever, stress, low immunity, disturbed menstrual cycle, sunlight, low socio-economic status. Fig 4 presents perceived trigger factor's for herpes labialis among the participants. Burning sensation was the prompt symptom encountered followed by itching, pain, fever, swelling and redness.52.8% of the individuals experiences herpes labialis once in a year while 23.2% experiences twice whereas 47.2% participants experiences herpes labialis in winters.

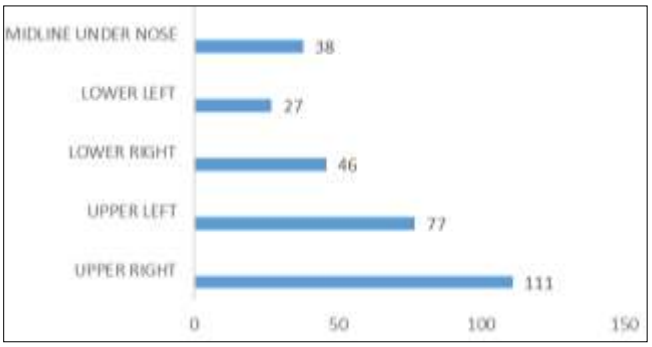

Fig 3: Location of occurrence of Herpes labialis leions.

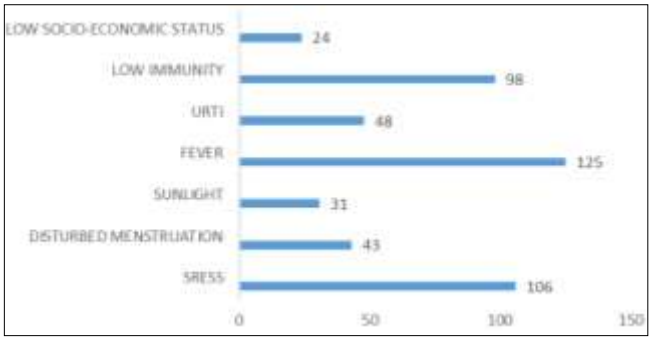

Fig 4: Perceived triggers for the episodes of Herpes labialis among the participants.

52.4% participants reported healing within a week whereas 10.2% reported healing within a month. Table 5 presents the preferred consulting professional's among the participants. 15.4% of the individuals prefer home remedies while 19.5% prefers over the counter prescription. The actions taken by participants for treating the burning sensation caused by herpes labialis is presented in Fig 6. The dietary changes while having herpes labialis was found to be less spicy and liquid.

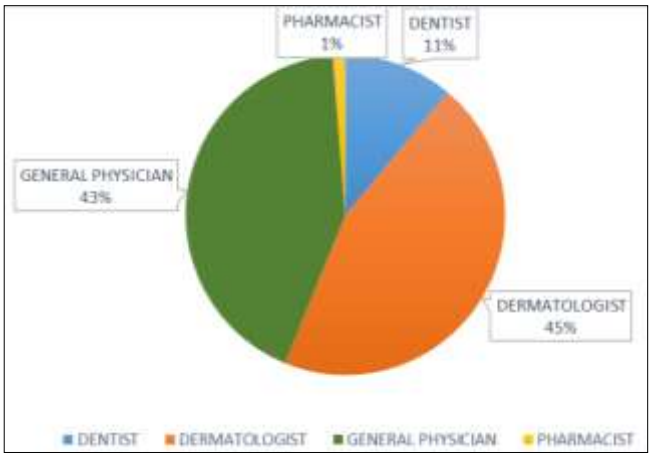

Fig 5: Preferred consulting professional's among the participants.

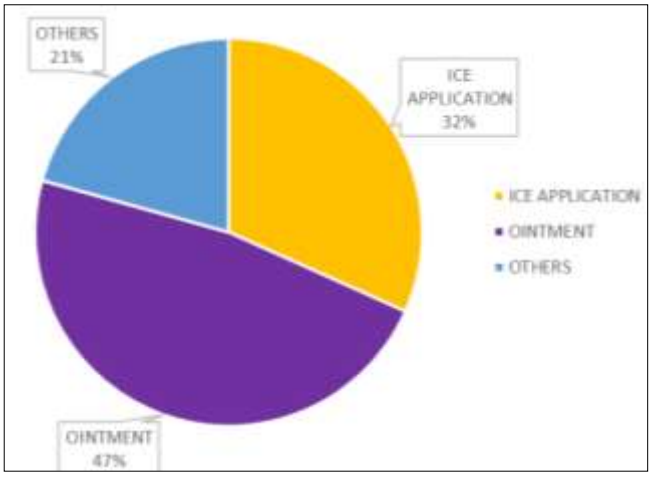

Fig 6: Action taken by the participants during the episodes of Herpes Labialis

41.9% participants thinks this infection is alarming. 51.6% of the individuals felt at ease addressing this infection outbreak with friends, family or healthcare professionals while 10.6% conveyed a sense of hesistation. 39.8% participants acknowledge that herpes labialis affects their self esteem and confidence [Fig 7]. 47.6% participants consider this infection to be a notable concern for overall health. 36.2% of the individuals believe that this infection influences social relationships. 50.4% favour educating the infected person as a constructive response towards them whereas 68.7% actively engage in educating people about herpes labialis infection. 60.6% are inclined to modify their lifestyle habits to decrease the frequency and severity of herpes labialis outbreaks.

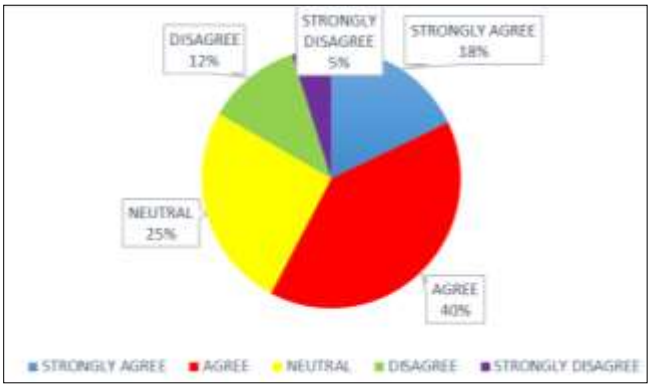

Table 7: Participants acknowledging the impact of Herpes labialis on self-esteem and confidence

Discussion

Recurrent Herpes Labialis also known as Cold sores or Fever blisters is a common recurrent infection manifested by Herpes simplex virus type-1 on the perioral area or lips. The herpes simplex virus (HSV) can lead to a broad spectrum of human diseases, spanning from mild, localized infections in the general population to severe and potentially life-threatening conditions in immunocompromised individuals [1]. Due to its wide prevalence, this study was conducted to gain knowledge about the manifestation, risk factors and management of Herpes Labialis infection among mass population in Pune city.

In our study population Herpes Labialis infection was more prevalent in the age group of 20-30 years of age and was more common in females than males indicating female predominance (male: female=58.1:41.9) [Table 1]. This is in accordance with the study conducted by the Dental students studying in Krishna institute of medical sciences Deemed University, Satara under the study of prevalence of recurrent Herpes Labialis in western Maharashtra (Ashwini R, *et al*, 2021) [4] while the age criteria was in alignment with the study conducted by Mathew *et al*, 2008 [5] prevailing in the age group of 21-40 years.

In most instances, the clinical onset of Herpes Labialis is typically preceded by localized prodromal symptoms like pain, tingling, burning, or itching. These sensations are promptly recognized and remembered by the affected individuals. The majority of individuals categorize herpes labialis as a viral infection or internal fever while 13% people consider it as allergic reaction while the most common term used to describe the infection remained Fever blisters [Fig 2]. In the present study, 42.7% of the study population had experienced atleast one episode of Herpes Labialis once in their lifetime. This percentage is slightly more than that reported by an Italian study (40%) conducted by Francesca *et al* about Public awareness and knowledge of Herpes Labialis. 67.1% of the patients faced the recurrence of the infection while 21.5% had last encountered before a year.

Recurrent Herpes Labialis is usually marked by recurrent fluid filled blister appearances adjacent to or on the vermillion border of the lips. In the study the most commonly occurring location for Herpes Labialis Infection was upper lip especially right side followed by left side, lower right side and midline under the nose [Fig 3]. Similar results were observed by Ashwini *et al* [4] in their study on RHL in western Maharashtra. Maximum number of population experienced the cold sore in winters being 47%.

Various factors are believed to be associated with recurrent episodes of Herpes Labialis (RHL), including stress, female gender, engaging in outdoor activities in sunlight, advancing age, fever, and experiencing frequent upper respiratory infections [Table 4]. Here fever was the most common risk factor followed by stress in the occurrence of Herpes Labialis infection while other risk factors such as disturbed menstrual cycle, sunlight, URTI, low immunity and socio economic status were also significant triggers. However compare to the previous literature, this survey showed slightly different results as the major risk factors was found to be fever unlike stress.

According to the data obtained above people typically manage herpes labialis through a combination of self-care including ointment and ice application [Table 6] and, in some cases, medical treatment. 43% of population consulted a dermatologist while 40% consulted a general physician for the treatment of this infection [Fig 5] while 23% went with no medication. The ability of the people to self-administer appropriate treatment or consult dermatologist or a physician was confirmed.

There is a social stigma associated with cold sores due to their association with the appearance around perioral area. 51.6% population was comfortable to discuss the infection outbreak with friends, family or health care professionals but 40% also agreed that it impacts their self esteem and confidence and confirmed its effect on their social relationships [Fig 7]. 47.6% of the study population agreed to the fact that cold sores are significant concern for overall health.

Due to the increasing awareness about the Herpes Labialis infection, mass population have gained knowledge and have been practicing educating people about this infection Education and open communication about herpes labialis can help reduce the stigma surrounding it. It's a manageable condition, and many people carry the virus without experiencing frequent outbreaks. So seeking support from healthcare professionals and understanding friends or family members can be beneficial in dealing with any associated social challenges.

Conclusion

In conclusion, this survey sheds valuable light on the knowledge and awareness associated with recurrent herpes labialis. The emotional impact of this condition, often leading to feeling of embarrassment, underscores the need for effective prevention and management strategies. This survey serves as a crucial step towards a better understanding of knowledge about risk factors and the management by the affected individuals.

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