Awareness about latex allergy among dental practitioners in Chennai

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INTRODUCTION

One of the milestones in medical achievements has been the introduction of surgical gloves made of natural rubber latex (NRL), commonly known as latex by William Halstead in 1890.[1] NRL is produced by the Hevea brasiliensis. Today, NRL gloves are indispensable to the health-care environment. They provide the most effective barrier to bloodborne. The concept of universal precautions was first suggested as being the standard in respect of infection control in 1987,[2] which involved the adoption of two major assignments - all patients be considered as potentially infectious and should be treated using similar personal protective barriers. Over the past few decades, there has been a substantial increase in the number of medical and dental personnel wearing gloves to protect against infection and the chemical used in the administration of treatment to patient. Studies have shown that dentists report more frequent and worse health problems than other high-risk medical professionals.[3,4] One among the risk is the allergy due to latex gloves. Hence, the aim of this study was to

ABSTRACT

Aim: The aim of this study is to assess the awareness about latex allergy among dental practitioners in Chennai city. Materials and Methods: A total of 247 dental practitioners in the Chennai city comprised the sample. A questionnaire comprising 20 responses was used. Results: The present study revealed that 68.01% of them are aware of signs and symptoms of latex allergy and 7.69% dentists are allergic to latex. More than 70% of dental clinics in Chennai are not equipped with Medical Emergency Kit. Conclusion: Allergic reactions to latex occur in significant numbers among dental practitioners, and they must become aware of the processes which limit exposure to latex and promptly address the adverse skin reactions. To ensure safe practice, health-care professionals must understand the source of latex allergies and must follow precise guidelines during practice.

KEY WORDS: Allergy, Dental practitioners, Latex

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MATERIALS AND METHODS

The present study was conducted on 247 dental practitioners working in different institutions in Chennai City, Tamil Nadu, using probability sampling technique. This survey was done using a structured questionnaire written in English and validated through a pilot survey. The questionnaire was designed to evaluate the knowledge and practice of latex glove among dental practitioners in Chennai. Informed consent was obtained from each participant before the study.

The time limit set for the collection of data from the subject participating in this study was scheduled for a week. It is a cross-sectional questionnaire survey. The questionnaire was developed based on a literature review. Before data collection, a pilot study was carried out to pretest a questionnaire. The questionnaire was then modified and presented as a serial of 20 questions. In addition, demographic information collected from the respondents included their age, gender, number of years in practice, and practice type.
RESULTS

A total of 247 dental practitioners were taken in the study. Of the respondents, 143 (57.89%) were male and 104 (42.1%) were female between the age group of 24 to 48 years.

Figure 1 illustrates that 42.5% of dentists are aware that latex is a natural product, 68.01% of them are aware of signs and symptoms of latex allergy, and 57.5% of them know that orthodontic elastics contains latex. Majority of participants (85.02%) accept that dentists are at high risk of latex allergy.

Figure 2 depicts that around 7.69% of dentists are allergic to latex, and 42.1% and 41.29% suffer from asthma/rhinitis and have problems of sneezing/itching, respectively.

Figure 3 shows that 36.84% of dentists have come across patients with latex allergy in their routine dental practice, and 24.29% of them only stock non-latex gloves. Majority of the participants (78.55%) are not trained in handling patients with hypersensitivity reactions. More than 70% of dental clinics in Chennai City are not equipped with Medical Emergency Kit.

Figure 4 shows that 40.48% of dentists prefer non-latex gloves, 33.1% prefers natural latex glove, and 26.31% use powder-free latex gloves.

DISCUSSION

In the present study, 247 dental practitioners responded, of which 143 (57.89%) were male and 104 (42.1%) were female between the age group of 24 and 48 years. The prevalence of latex allergy is increasing among dental workers, although the prevalence in the general population appears to have remained at least. In this study, we found that latex allergy to glove was present in 7.69% of dental workers when compared to Europe where it is ranged from 2.8 to 10.7%, and in the U.S, it was 5.5–15.9%. A study in Bangalore city reported a prevalence of 12.3% of dental glove-related symptoms which is in accordance with studies of Chin et al., Hamann et al., and Hill et al. Amin et al. conducted a study to survey general dental practitioners in New England concerning their exposure to latex and the prevalence of occupationally related allergies and concluded that adverse skin reactions to latex gloves were reported in 22.8% of practitioners, in a similar study by, Chen YH, Lan JL in 1997 found that the prevalence of latex allergy among dental workers in Taiwan was 18.18%. A study in Rajasthan reported the prevalence of latex allergy in 16% of dental professionals, of which females were 27.3% and males 11.8%. Vangveeravong et al. conducted a cross-sectional survey in which 5% of the dental professionals were allergic to latex. Sriram and Abilasha, in a survey, concluded that 33% of the professionals were allergic to latex.

Diagnosis of glove use related symptoms from the answers to a questionnaire can lead to an overestimation of latex allergy. An accurate diagnosis can be made only by measuring IgE antibodies to latex or by performing a skin prick test. Hence, it was not possible to differentiate between the primary symptoms and aggravation of pre-existing dermatoses.

In this present study, we found that only 24.29% of dentists stock non-latex glove though 36.84% of dentists have come across patients with latex allergy. The study also reveals that 78.55% are trained to handle patients with latex allergy and not equipped with medical emergency kit in their clinical setup.
In the above study, it is clear that the knowledge and practice related to latex allergy are inadequate and it is recommended that continued dental education program and workshops related to handling allergic patients are essential, and also our results indicate that simple measures such as the avoidance of unnecessary glove use and use of non-latex glove can stop the worsening of latex symptoms and can prevent new cases of sensitization.

CONCLUSION

Allergic reactions to latex occur in significant numbers among dental practitioners, and they must become aware of the processes which limit exposure to latex and promptly address the adverse skin reactions. To ensure safe practice, health-care professionals must understand the source of latex allergies and must follow precise guidelines during practice.

REFERENCES


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