

STUDY OF LATEX GLOVE ASSOCIATED DERMATOSES AMONG NURSES IN A TERTIARY CARE HOSPITAL

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BACKGROUND

Latex gloves are manufactured with natural rubber latex from the *Hevea brasiliensis* tree and can cause a number of reactions that can increase healthcare workers' morbidity. These allergic reactions include Type I immediate hypersensitivity from latex, and allergic contact dermatitis from the chemicals added to the manufacturing process of the latex gloves. The most common reaction, however, is non-allergic irritant contact dermatitis caused by wearing the gloves themselves or from glove powder. The risk from latex gloves can be reduced with primary prevention strategies such as early symptom recognition, staff education, and using low-protein powder-free latex gloves. By not exposing staff to latex and using synthetic gloves, this secondary prevention of latex allergies can also result in a decline in socioeconomic outcomes.¹

Due to a lack of regional data but with a large healthcare population, India has undertaken a study to understand the prevalence of latex glove-related dermatosis among its nursing population and what factors are leading it.

OBJECTIVES AND METHODS

The objective of this study was to understand the prevalence and causes of latex-glove-induced dermatoses by measuring nurse outcomes and exposures to latex gloves over 1.5 years. The study consisted of data collection in a face-to-face interview, and if nurses had any signs and symptoms of skin sensitivities then patch testing, prick testing and glove challenge test were performed.



RESULTS

A total of 700 nurses participated in this study.



Symptoms of latex dermatoses were present in 74 (10.6%) of the study subjects, out of which 69 (9.9%) had features of allergic and/or irritant contact dermatitis and 21 (3%) had Type I latex allergy.



The incidence of irritant dermatosis increased from handwashing with soap, and allergic dermatosis if there was a genetic history of allergy present, fruit allergy and latex allergy to other products.



Dermatoses was statistically significant amongst nurses wearing gloves for more than 3 hours.

The most significant factors contributing to latex sensitivity was **hand soap, previous latex sensitivity, and duration of glove use**

CONCLUSION

This study confirms that latex allergy remains a significant problem in India with glove-related symptoms present in 10.6% of nursing subjects. There are several contributing factors to latex sensitivity incidence, including a history of allergic diseases, a history of rubber allergy, and a history of fruit allergy. A significant factor also contributing is the frequency and duration of exposure to latex gloves. Based on the results, this study recommends that to avoid negative socioeconomic consequences, non-latex gloves should be made available and developing pre-employment protocols and health checks to avoid workplace adverse outcomes.



KEY TAKEAWAYS

- Glove powder is known to cause irritant contact dermatitis.
- Workplace Morbidity: Occupational and work-related injuries occurring in the workplace such as wearing latex gloves causing reactions.
- Immediate hypersensitivity reaction can present symptoms affecting the skin such as itching, redness or hives. These skin reactions at point of contact with the gloves needs to be taken seriously. Seek professional advice from a trained professional that can diagnose the cause of the skin reactions.

APPLICATION FOR PRACTICE



1
Early recognition and proper diagnosis of skin reaction



2
Hand health education



3
Switching to powder-free NRL gloves with reduced protein content, has been associated with a decline in the number of these cases

Note: This clinical summary is written by clinicians at Ansell Healthcare Products LLC. Please refer to the actual study for full text information.

Tomy C, Joseph B, Madhukara J. Study of Latex Glove Associated Dermatoses Among Nurses in a Tertiary Care Hospital. Indian Dermatol Online J. 2021;12(6):841-846.

Reference:

1. Wu M, McIntosh J, Liu J. Current prevalence rate of latex allergy: Why it remains a problem? J Occup Health 2016; 58: 138-144.

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