Sigma's 29th International Nursing Research Congress

Matching of the Latex Fruit Syndrome and Daily Rubber Products Survey to Japanese Nursing Students

Emi Kajiwara, MSN, RN
Faculty of Nursing, Department of Nursing, Fukuoka Nursing College, Fukuoka, Japan
Hidechika Iino, BSN, MEco, RN
Department of Nursing, Fukuoka Nursing College, Fukuoka, Japan
Satoko Ono, MSN, RN
Department of Nursing, Kawasaki University of Medical Welfare, Kurashiki, Japan

【Background】

We are researching the prevention of latex allergies (LA) in a Japanese undergraduate nursing program. It was clarified that there were some nursing students with allergies to rubber products. We discuss the correspondence between such allergies to rubber products for daily use and the risk factor of latex fruit syndrome based on results of our survey data.

【Purpose】

The purpose of this study is to clarify the correspondence the allergies to rubber products of daily use, e.g., household gloves, rubber bands, hairbands with LA-associated foods e.g., kiwifruits, bananas, chestnuts and avocados.

【Method】

We conducted a questionnaire survey to 611 Japanese nursing university students. The data were analyzed by descriptive statistics. Ethical approval for this study was obtained from the Ethical Review Committee of Seinan Jo Gakuin University (Former affiliated university).

【Results】

All respondents were female and average age was 19.1years old. Of these, 9.0% (55/611) had oral allergic symptoms to fruits and vegetables. Most of them had no consultation doctors, they were taking preventive action to avoid their fruits and vegetables. For most of them, only one type of fruits and vegetables was symptomatic. However, 5/611(0.8%) of the students had symptoms on 5 or more fruits and vegetables. As for avocados, chestnuts, bananas and kiwifruits which frequently cause latex fruit syndrome, 32.0% (18/55) students have experienced allergic symptoms to kiwifruits, 5.4% (3/55) to bananas, 1.8% (1/55) to avocados, 0 to chestnuts.

0.6% (4/611) students have experienced allergic symptoms to both of rubber products (gloves, rubber bands, headbands and balloons) and fruits or vegetables. These 4 students had oral allergic symptoms to kiwifruits, tomatoes, peaches, papayas, mangos and melons.

【Conclusion】

In the Japanese guidelines, one of the risk of LA is latex fruit syndrome. Female university students were considered to have higher frequency of kiwifruits intake compared to chestnuts and bananas. It is difficult to assess LA risk only with foods listed in latex fruit syndrome. However, integrating the results of each inquiry enables selection of the material for use gloves and medical products, and furthermore, it is possible to proceed to the next stage, such as a skin prick test or an IgE antibody test.

Title:

Matching of the Latex Fruit Syndrome and Daily Rubber Products Survey to Japanese Nursing Students

Keywords:

latex allergy, nursing student and prevention

References:

1.FDA:Banned Devices; Powdered Surgeon's Gloves, Powdered Patient Examination Gloves, and Absorbable Powder for Lubricating a Surgeon's.2016. Glovehttps://www.federalregister.gov/documents/2016/12/19/2016-30382/banned-devices-powdered-surgeons-gloves-powdered-patient-examination-gloves-and-absorbable-powder

2.Miaozong Wu, James McIntosh, Jian Liu : Current prevalence rate of latex allergy; Why it remains a problem?, *Journal of Occupational Health,* 2016, 58, 138-144.

3.Mitsuya K, Iseki H, Masaki T, *et al*:Comprehensive analysis of 28 patients with latex allergy and prevalence of latex sensitization among hospital personnel, J Dermatol. 2001 Aug;28(8):405-12.

4.Association of Perioperative Registered Nurses(AORN)ï¼š AORN latex guideline, AORN ,79(3),653-72,2004.

5.Weiss SJ, Halsey JF:A nurse with anaphylaxis to stone fruits and latex sensitivity: potential diagnostic difficulties to consider.Ann Allergy Asthma Immunol,1996 Dec;77(6):504-8.

Abstract Summary:

We are working on prevention of latex allergy in basic nursing education.Latex allergy is an allergy that uses natural rubber as an antigen. There is a characteristic that shows cross reaction with certain fruits.This study focused on the relationship between nursing student 's allergic situation with rubber products and fruits.

Content Outline:

【Background】

We are researching the prevention of latex allergies (LA) in a Japanese undergraduate nursing program. It was clarified that there were some nursing students with allergies to rubber products. We discuss the correspondence between such allergies to rubber products for daily use and the risk factor of latex fruit syndrome based on results of our survey data.

【Purpose】

The purpose of this study is to clarify the correspondence the allergies to rubber products of daily use, e.g., household gloves, rubber bands, hairbands with LA-associated foods e.g., kiwifruits, bananas, chestnuts and avocados.

【Method】

We conducted a questionnaire survey to 611 Japanese nursing university students. The data were analyzed by descriptive statistics. Ethical approval for this study was obtained from the Ethical Review Committee of Seinan Jo Gakuin University (Former affiliated university).

【Results】

All respondents were female and average age was 19.1years old. Of these, 9.0% (55/611) had oral allergic symptoms to fruits and vegetables. Most of them had no consultation doctors, they were taking preventive action to avoid their fruits and vegetables. For most of them, only one type of fruits and vegetables was symptomatic. However, 5/611(0.8%) of the students had symptoms on 5 or more fruits and vegetables. As for avocados, chestnuts, bananas and kiwifruits which frequently cause latex fruit syndrome, 32.0% (18/55) students have experienced allergic symptoms to kiwifruits, 5.4% (3/55) to bananas, 1.8% (1/55) to avocados, 0 to chestnuts.

0.6% (4/611) students have experienced allergic symptoms to both of rubber products (gloves, rubber bands, headbands and balloons) and fruits or vegetables. These 4 students had oral allergic symptoms to kiwifruits, tomatoes, peaches, papayas, mangos and melons.

【Conclusion】

In the Japanese guidelines, one of the risk of LA is latex fruit syndrome. Female university students were considered to have higher frequency of kiwifruits intake compared to chestnuts and bananas. It is difficult to assess LA risk only with foods listed in latex fruit syndrome. However, integrating the results of each inquiry enables selection of the material for use gloves and medical products, and furthermore, it is possible to proceed to the next stage, such as a skin prick test or an IgE antibody test.

First Primary Presenting Author

Primary Presenting Author

Emi Kajiwara, MSN, RN
Fukuoka Nursing College
Faculty of Nursing, Department of Nursing
Lecturer
Fukuoka
Japan

Professional Experience: 2017--Lecturer,Faculty of Nursing, Department of Nursing,Fukuoka Nursing college,Fukuoka,Japan. 2009--Lecturer,Faculty of Nursing, Department of Health and Welfare,Seinan Jo Gakuin University,Fukuoka,Japan. My major roles are teaching about fundamental nursing• (8 credits/yr)and clinical practice• (4 credits/yr) to undergraduate students. I have concerned prevention of latex allergy for nursing students and approaches to improve the gap between clinical nursing technique and it we teach in our university. 2003--Assistant Research Scientist 1996--Nurse(ope nursing),Kyusyu Central Hospital of the Mutual Aid Association of Public School Teachers.
Author Summary: I have worked as a faculty at the university for more than 10 years. My specialty is fundamental nursing. Representative subjects are nursing skill and nursing process. In addition, they are

also involved in the first year college education. I am researching prevention of latex allergies (LA) in a Japanese undergraduate nursing program. I aim to promote the construction of the prevention system and caring mind to care for patients and colleagues through these studies.

Second Secondary Presenting Author

Corresponding Secondary Presenting Author

Hidechika Iino, BSN, MEco, RN
Fukuoka Nursing College
Department of Nursing
Professor
Fukuoka
Japan

Professional Experience: 2017-present -Professor, Faculty of Nursing, Fukuoka Nursing College , Fukuoka, JAPAN. 2009- Professor, Department of Nursing, Faculty of Health and Welfare, Seinan Jo Gakuin University, Fukuoka, JAPAN. 2005-09 -- Vice Director (Nursing continuing education and clinical research), Department of Nursing, Yamaguchi University Hospital, Yamaguchi, JAPAN 2003-05 -- Lecture (Pediatric nursing), Faculty of Health Sciences, School of Medicine, Yamaguchi University, Yamaguchi, JAPAN 1997-2003 -- Research Associate (Pediatric nursing), School of Allied Health Sciences Yamaguchi University, Yamaguchi, JAPAN 1990-96 -- Nurse (Pediatric nursing), Nippon Medical School Hospital, Tokyo, JAPAN Responsible for development of education and research relating to Nursing administration and Genetic nursing about children with rare chromosomal anomaly (1997-present) Executive board members of Japanese Society of Genetic Nursing (2000-2012) The member of Sigma Theta Tau International (2004-present) Assistant Editor, Nursing and Health Sciences (International Journal) (1997-2002) Author or coauthor of 138 publications and 8 book chapters primarily relating to Pediatric nursing, Nursing administration, and education.
Author Summary: I am a Professor at the Department of Nursing, Faculty of Health and Welfare, Seinan Jo Gakuin University, Fukuoka, JAPAN. Before that I worked as a vice-director at the department of nursing, Yamaguchi University Hospital. My research interests are the genetic nursing and nursing administration.

Third Author

Satoko Ono, MSN, RN
Kawasaki University of Medical Welfare
Department of Nursing
lecturer
Kurashiki
Japan

Professional Experience: It is sixth year for me as a faculty at a university. My specialty is fundamental nursing. I have been in charge of education of nursing skill, nursing process and clinical practice. My research theme is caring and safety in nursing education. I am working on the development of the scale to measure caring ability for nursing students in consideration of a cultural background.
Author Summary: I am a lecturer in Department of Nursing, Kawasaki University of Medical Welfare. I teach nursing skill and nursing process. My research theme is caring education for nursing students.