

LATEX ALLERGY – A CASE REPORT

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Introduction

The usage of rubber and its products are not uncommon in various walks of life. A continuous exposure or contact may sensitize the human body, causing reactions from mild to fatal. Despite the availability of the literature, medical personnel are still unaware of the implications of the use of latex materials.

Until 1989, latex allergy was described in the medical literature as "an unfamiliar condition."¹ In the last decade, there have been increased reports of allergic reactions to latex. The increased awareness to prevent the transmission of infectious blood borne pathogens has lead to use of medical gloves among the health workers. This increased awareness and usage, with improved methods in diagnosing latex allergy, has been the reason for the rise in the number of reported cases. This has lead to recognition of latex allergy as a serious medical concern.

The credit of the earliest recognition of latex allergy has been with the Pediatric anesthesiologists since, many of the initial case reports occurred in children's hospitals. The high incidence of 73%^{1,2} has been attributed to repeated exposure, atopy or genetic predisposition^{3,4} particularly in patients with spina bifida and related pathologies.

The incidence of latex allergy in the general population has been estimated between 1% and 6%. The incidence in healthcare workers with regular exposure to latex-containing devices and products ranges from 8% to 17%. Among the healthcare workers anesthesiologists are at more risk for exposure⁵. Although the incidence among anaesthesiologists who are sensitized to latex is about 12.5percent, about 2.4 percent need treatment⁵.

We report a case of near fatal allergy to latex glove, to emphasize the importance of eliciting a detailed history and its documentation. A cursory approach to the patient's history may prove expensive, to both , the provider and the patient.

Case History

A 42 year old lady working as an anaesthetic nurse attended an outpatient gynecology clinic for menorrhagia. She was a known case of rheumatic heart disease with mitral stenosis and mild mitral regurgitation. She also had mitral valve prolapse with history of palpitations for which Tab digoxin (0.25mg OD) and frusemide (20mg OD) had been earlier advised by her physician. She had a history of poor compliance to medications. She gave the history of allergy to latex gloves for several years. She had a vaginal examination by the attending physician using the latex glove, prior to an ultrasonography. While waiting in the lounge, she complained of breathing difficulty and had repeated bouts of cough.

She became restless, and developed facial swelling. Her pulse became thready and the blood pressure was not recordable by the non invasive method. She was shifted to Emergency room, and received intravenous adrenaline, hydrocortisone along with crystalloids and oxygen by mask. She was discharged two days later with complete recovery.

Discussion

Allergen exposure in a person known to be allergic to natural rubber latex can produce an array of symptoms ranging from mild reactions to life threatening anaphylaxis⁵. This patient with no history of allergy to latex since childhood, had developed allergy during the professional career. This confirms the fact that constant contact with the latex gloves can sensitise the human body.

The allergic manifestation in a sensitized person occurs after 20-30 minutes of mucosal contact as was in this patient. This patient developed the anaphylactic reaction while waiting for further investigation after initial mucosal contact with the latex during examination. The reaction is heralded by hypotension, tachycardia, bronchospasm, wheezing, associated urticaria or generalized flushing of the skin. In this case the complaint of difficulty in breathing with repeated bouts of coughing heralded the development of bronchospasm with early signs of possible pulmonary oedema. She also had tachycardia, hypotension and swelling of face with flushing of skin, the pathognomonic features of anaphylaxis.

Anaphylactic reactions can occur during a variety of common medical procedures such as, barium enemas, oral, vaginal, and rectal examinations using latex gloves as well as during surgery (particularly of the genitourinary tract) and anesthesia,. In most cases, there has been contact between latex products and mucous membranes. However, in some exquisitely sensitive individuals, exposure through inhalation of aerosolized latex or through intravenous administration sets has led to severe reactions. This type of reaction is similar to immediate drug reactions, associated with rapidly progressive anaphylaxis and death.

Although, a detailed patient history is important since it is the most sensitive means of detecting individuals at risk, one recent study showed history alone is somewhat unreliable in predicting the presence of anti-latex (IgE) antibodies⁶.

The presence of latex-specific IgE antibodies may be detected in both blood and skin. The latex extract for skin prick testing is being standardized to improve test sensitivity. Skin prick testing is preferred to intradermal skin testing, because the latter carries a greater risk of systemic reaction, as the antigen can not be wiped from the skin. A qualified specialist with full resuscitative equipment and medications should perform the Skin testing.

In vitro immunoassays techniques measure IgE anti-latex antibody in serum. Currently available serum assay technique include the enzyme-linked immunosorbent assay (ELISA) and the radioallergosorbent test (RAST). In earlier studies the RAST had only a 53% sensitivity compared to skin tests⁷. More recent studies show improved sensitivity.

Neither skin nor blood testing necessarily predict clinical reactions to latex exposure. In addition, a negative latex-specific IgE skin or blood test does not rule out a latex allergy. It is probably safest to recommend latex precautions for all individuals with a positive skin test, a positive blood test or a positive history. **A complete and thorough medical history remains the most reliable screening test to predict the likelihood of an anaphylactic reaction.**

Early recognition and appropriate treatment are the hallmark for a successful outcome as was in this case which helped a complete recovery. This case also emphasises the role of adrenaline as the first drug of choice in anaphylactic reaction.

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