

“Story of Allergens”-collection of rhymes as a tool for dealing with the fear of needles in children

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Submitted: 02 Oct 2021; Accepted: 09 Oct 2021; Published: 17 Oct 2021

Citation: Diana Hristova (2021) “Story of Allergens”-collection of rhymes as a tool for dealing with the fear of needles in children. *Medical & Clinical Research* 6(10): 762-764.

Abstract

Needle phobia is an extreme psychiatric disorder that includes visual avoidance of the phobic stimulus. The average age of onset is 5.5 years and its incidence decreases with age. This condition often is the main reason for inability to perform skin allergy tests. “Story of Allergens” for home education improves cooperation in doctor-patient- parent interaction.

Keywords: Skin Tests, Needle Phobia, Allergy, Home Education.

Introduction

Skin prick testing (SPT) is a reliable method to confirm IgE-mediated allergic disease. It is non-invasive, affordable, and the findings are available in 15-20 minutes. SPT can also be used to test less common allergens including particular drugs and fresh fruits and vegetables that don't have specific IgE antibody measurements available from 85 to 95 percent[1].

Skin testing does not have any age restrictions. Skin prick testing in children under the age of two should be regarded a professional practice due to the higher danger and difficulty of interpretation. However, skin tests remain the gold standard in routine allergy practice.

The manipulation is associated with a series of stings on the patient's forearm in order to identify the specific allergen that provokes the clinical manifestation of the allergic disease. The described manipulation is related to “meetings” with needles and/or lancets, making needle fear one of the most common issues in allergy clinics[2].

Needle phobia is often the reason for the inability to perform skin allergy testing, which delay diagnosis of allergic disease and determination of therapeutic behavior to maintain disease control and prevent complications. Daily allergological practice involves the manipulation of skin allergy testing, which corresponds to the phobia of needles. Children's active engagement in the manipulation is elicited when they are included in story-role

games. The doctor, the child, and the parent all take part in this activity. The assignment of responsibilities (involvement in the game) to the components of skin allergy testing is an important point.

Aim

In order to provoke active cooperation of child patients in this process we created a tool for home education and preparation of the child for the upcoming skin testing.

Materials and Methods

Children (n=27) in the age range 3-6 years were included in our study. All children refused skin testing at the first visit. Children's anxiety was assessed by their parents(Fig 1).

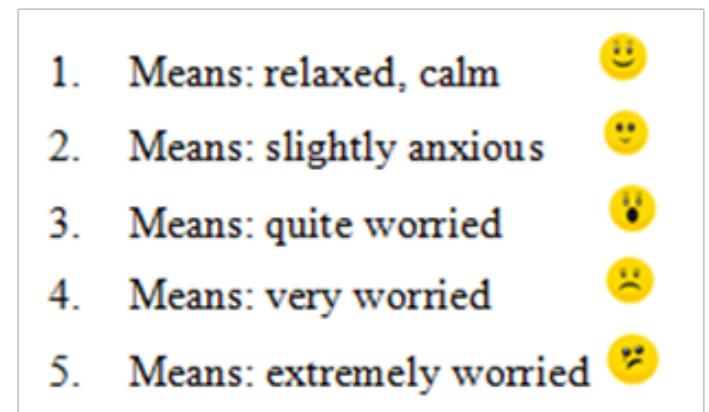


Figure 1: Parent's report anxiety scale.

Each child received a book called “Story of Allergens” for home education until next visit (Fig 2).



Figure 2: “Story of Allergens”-book in rhymes for home education.

Discussion and Results

The terms “fear of needles” and “phobia of needles” describe anxiety associated with situations involving the use of needles and/ or injections. However, needle phobia is defined in the Diagnostic manual of mental disorders as an extreme psychiatric disorder rather than generalized fear and often includes visual avoidance of the phobic stimulus as well as a biphasic vasovagal response with initial increase and subsequent abrupt decrease which can lead to collapse. Less commonly, this type of phobia occurs as generalized fear or anxiety. Fear conditioning is traditionally based on bad experiences. The average age of onset is 5.5 years and its incidence decreases with age. Needle phobia is the reason why 19% of adults in the United States have not received pneumococcal vaccination and 20% have not been vaccinated against tetanus [2]. While the condition can be diagnosed in 19% of children aged 4-6 years, in children aged 10-11 years, it can be detected in 11% [3]. The etiology of the condition is associated with genetic factors and concomitant life events. Fear is often a transient phenomenon during childhood, but it can also persist, developing into a phobia. It is widely known that the condition is provoked by a specific life situation and is supported by the behavior associated with avoiding this situation. However, 80% of adults with needle phobia report having first-degree relatives with similar fears [4].

According to the literature anxiety in children related to the use of needles is a significant problem, considered mainly in dental practice. In a number of studies authors have chosen validated assessment method in accordance with limited cognitive and language skills among children. The Venham Picture Test is picture scale that meets the required criteria. It has been used in a large number of studies to assess anxiety before treatment. It is facial image scale for measurement of children’s anxiety when visiting a dentist and include a series of five faces ranging from a very happy to a very unhappy person (scores range from 1 to 5; 5 indicates the highest level of anxiety). Validation studies have shown that it is an appropriate measure to assess anxiety in very young children [5] (Table 1).

In allergological practice, conducting skin allergy testing is a routine process. This fact necessitates the creation of a tool for overcoming the fear of needles, eliminating the active cooperation in the course of skin allergy testing.

Texts in rhymes prepared by the author of the current study are utilized in communication with the patients based on their age. This method ensures that both children and parents are actively involved in the process.

This gave rise to the idea of creating a tool for preliminary preparation for a visit to a doctor and performing medical procedures. “Story of Allergens,” a collection of rhymes, is this tool.

The impact of the instrument as a means of ensuring the active participation of children in the course of skin allergy testing was assessed using a T-test for two independent samples.

The influence of the newly designed tool appears to have a propensity to promote children’s participation in the conduct of skin allergy testing by lowering their fear of manipulation (t-test, p0.05).

Table 1: Impact assessment of the tool.

	Pre-questionnaire	Post-questionnaire
Mean	23.76923077	16.61538462
Variance	10.85897436	5.256410256
Observations	13	13
Pearson Correlation	0.141694451	
Hypothesized Mean Difference	0	
df	12	
t Stat	6.899940167	
P(T<=t) one-tail	0.0000082559	
t Critical one-tail	1.782287556	

The development and application of the tool improves cooperation in the doctor-patient- parent interaction. Presentation of information about the upcoming meeting in a form that children can see and understand enables for closer communication with the children and their parents. Such collaboration serves as a foundation and assurance for improved health and the avoidance of difficulties. This newly designed instrument, on the other hand, contains medical advice on how to decrease exposure to seasonal and permanent allergies.

Conclusion

In this light, this book is a means of “learning” health habits that reduce both the onset of allergic diseases and the maintenance of stable control of the child’s condition when they are already present. Compliance with the “rules” is a kind of age-related

prevention in the course of the atopic march, and the concordance of the instrument with the age characteristics of the examined group ensures understanding and “audibility” between the three interlocutors. Also important is the educational and aesthetic character of “Story of Allergens”, which is valuable in light of the educational process of adolescents.

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