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Introduction of Peanuts to the Pediatric Patient

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Abstract
Peanut allergies have been diagnosed exponentially over the last ten years and are more severe now than ever before. (DuToit et al. 2010) Some of the latest statistics are citing more than double the amount of peanut allergies diagnosed in the last few years. Guidelines set forth in 2010, by the American Academy of Allergy, Asthma, and Immunology stated that peanut, milk, soy, wheat, egg, and other tree nuts were to be avoided until three years of age, unless these patients have other chronic illnesses such as asthma or other atopic conditions. If so, the patient is to abstain from these items until the age of five years. Once the patient reaches this stage of life, foods are to be introduced slowly, in small quantities, one food at a time. (American Academy of Allergy, Asthma & Immunology, 2010) The guidelines have changed in the last two years after a study known as Learning Early About Peanut Study, LEAP, became published in 2013. It was previously advised to withhold peanut-laden foods until at least three years of age. Recent guidelines suggest children who are exposed to these foods can allow for desensitization from these allergens before their immune systems are completely competent, minimizing potential anaphylactic reactions. (Learning Early About Peanut Study, 2011) The results of this project aim to justify the newest guidelines and research and show that introduction to the peanut protein at age four to six months, allows for immune competency in the pediatric body and quite possibly in utero. The pathophysiology of the immune response is exponentially different as the body continues to be introduced to cross-reactive allergens as you age.

Introduction

“Please refrain from any sort of peanut or peanut butter snack in Simon’s Elementary School. We have a child who is very allergic to peanuts in the school system.” How many times have you heard a parent say something similar to you with their child on the first day of school? Pediatric allergies are being diagnosed more now than ever before. There is an average of 8% of the pediatric population in today’s society with severe anaphylactic reactions to peanut and foods produced in a factory that contain tree nuts. (Wood, 2017) The guidelines for the introduction of peanuts to children have changed since the last two years, thanks to a study that was performed in the United Kingdom in 2015. This study is called the Learning Early About Peanut Study, or LEAP as it is commonly known, and it changed all previous guidelines regarding the timing for introduction and consumption of allergens such as peanuts among the pediatric population. For decades, the guidelines stated that children should not be introduced to high-allergen related foods until the age of three. The reason behind this recommendation stems from many research that suggested the infant body was unable to properly digest the protein found in peanuts. Peanuts and other tree nuts contain protein that the body’s immune system deems foreign when the body has not been properly introduced at an early age. (LEAP, 2011)

Statement of the Problem
For many years, parents have been advised to withhold peanuts from children until the age of three to prevent a peanut allergy in a small child. In 2015, a clinical trial called the LEAP study was completed that has shifted the way some providers practice medicine. This study concluded that it is not beneficial to withhold peanuts and other tree nuts from children, and in fact, is thought to be harming the child by not allowing them to be exposed to this at the age of six months. (LEAP, 2011) This research also stated that in the clinical atopy patient, all of these potential allergies should be held until the age of five. New research now suggests beginning these patients at the age of 4 months or upon first consumption of food sources. (AAAAI, 2017) Some research states that in utero the fetus potentially receives some immunity from the mother. Other research is controversial to the statement above, denying any link between the mother and child through the placental barrier prior to cutting the cord.

Discussion

• Regular ingestion of peanut containing foods and continued feedings at regular intervals up until the age of 5 has proven to reduce the intolerance of these allergens in the child’s immune system. Those patients who were allowed regular consumption of peanuts were 80% less sensitive to peanuts as those who avoided peanuts throughout the pregnancy and first year of life according to the LEAP-ON study. The study suggests that less than 5% of those research participants were sensitive to them. (LEAP-ON 2015) The group that avoided all peanut-laden foods had triple the amount of allergies to peanuts.

• Atopic children are more Th2 shifted immunologically, allowing for increased sensitivity to allergens with more probable outcome of allergies. (Pilang, 2009)

• Treatment options at this time are being explored. Introduction at a younger age is expected to decrease the prevalence of peanut allergies and Oral Immunotherapy is showing sustained unresponsiveness in clinical trials.

• The National Institute of Allergy and Infectious Diseases and the American Academy of Allergy, Asthma & Immunology both recommended introduction of peanuts and other tree nuts between the ages of four to six months. 2017 added guidelines brought forth by the AAAAI recommend that the most severe cases of atopy allow close monitoring and introduction between the ages of 4-6 months after additional serum IgE and SPT has been completed. If the child is allergic to eggs or has mild to moderate eczema, early introduction is still recommended. Providers are advised to counsel parents on the importance of early introduction of peanuts. (AAAAI, 2017)

References


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