Risk of EoE developing as IgE-mediated food allergy resolves

Some children who outgrow one type of food allergy might then develop another type of allergy, more severe and more persistent, to the same food. A new study by paediatric allergy experts suggests that health care providers and caregivers carefully monitor children with food allergies to recognise early signs of eosinophilic esophagitis (EoE), a severe and often painful type of allergy that has been increasing in recent years.

"These two types of allergy have some elements in common, but patients with EoE usually don't go on to develop tolerance to the foods that trigger EoE," said pediatric allergist Jonathan M. Spergel, M.D., Ph.D., of The Children's Hospital of Philadelphia (CHOP). Spergel directs CHOP's Center for Pediatric Eosinophilic Disorders, one of the nation's premier programs for these conditions.

Spergel is the senior author of the research, presented today by Solrun Melkorka Maggadottir, M.D., also of CHOP, at the annual meeting of the American Academy of Allergy, Asthma & Immunology (AAAAI) today in San Diego. The organization featured the study at a press conference.

Only recently recognized as a distinct condition, EoE involves swelling and inflammation of the oesophagus, along with excessive levels of immune cells called eosinophils. Often painful, EoE can cause weight loss, vomiting, heartburn and swallowing difficulties. It can affect any age group, but is often first discovered in children experiencing feeding difficulties and failure to thrive.

The study team compared EoE with IgE-mediated food allergy-the more familiar type of food allergy that occurs when antibodies mount

an exaggerated immune response against proteins in particular foods. Nuts, eggs or milk, for example, can trigger hives, other skin reactions, vomiting or other symptoms.

The researchers performed a retrospective analysis of all children seen at CHOP for EoE between 2000 and 2012, a total of 1,375 patients. Of that number, 425 could be shown to have a definite food causing their condition—most commonly milk, egg, soy and wheat. Within that subgroup, 17 patients had developed EoE to a food after having outgrown IgE-mediated allergy to that specific food.

"The pattern we found in those 17 patients suggests that the two types of food allergy have distinct pathophysiologies—they operate by different mechanisms and cause different functional changes," said Spergel. "However, this pattern also raises the possibility that prior IgEmediated food allergy might predispose a patient to developing EoE to the same food."

Spergel added that approximately 10 percent of patients who undergo desensitization therapy for IgEmediated foods allergies subsequently develop EoE to the same food—a fact that health care providers should consider in managing care for patients with food allergies. In desensitization therapy, a clinician exposes a patient to miniscule amount of an allergyproducing food, then gradually increases the amount, aiming for the patient to become tolerant to that

Maggadottir et al, Development of Eosinophilic Esophagitis to Food after Development of IgE Tolerance to the Same Food, abstract 990, presented March 2, 2014 at the AAAAI Annual

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