

[OS2-98] All Safe?: The Use of Propofol in Egg-Allergic Pediatric Endoscopy Patients

Zhu N, Blanchard S, Rock P, Martz D, Madhavi N
University of Maryland School of Medicine , Baltimore , MD, USA

Introduction:

Since propofol contains egg lecithin, concerns exist regarding its use in patients with egg allergy. Previous studies have shown relative safety in administering propofol to egg allergic patients(1), yet there have been reports of reaction to propofol in some patients with higher allergic burden (e.g. multiple food allergies and atopy)(2). Others have pointed out that most egg allergic children are allergic to the albumin in egg rather than lecithin, and that anaphylactic reactions to propofol may be elicited by iso-propyl or phenol groups of the drug rather than the lipid vehicle(3). All these studies have been limited by a small sample size.

Children with eosinophilic esophagitis requiring repeated endoscopies for diagnosis and follow up have multiple food allergies and a high atopic burden. They may be considered at risk for an allergic reaction to propofol.

Objective:

To evaluate the safety of propofol use in pediatric egg-allergic patients presenting for endoscopy.

Design:

Retrospective case series.

Methods:

A retrospective chart review was performed on children (age 0-18) with egg allergy who underwent endoscopy and received propofol sedation at our institution from September 2010-May 2013. Type of reaction to egg, relevant past medical history, and any reaction to propofol in the intraoperative and immediate postoperative period were recorded.

Results:

We found 85 egg-allergic patients undergoing a total of 134 endoscopies. Median age of patients was 7 years, 49 (56%) were male.

74(87%) patients had multiple allergies: 40(47%) had soy allergy, 44(52%) had peanut allergy, 54(64%) had other food allergies, 27(32%) had non-food allergies, and 33(39%) had seasonal allergies. 51(60%) patients had eosinophilic esophagitis, 43(51%) had eczema, and 56(66%) had asthma. We characterized each patient's reaction to egg: 19(22%) rash, 28(33%) GI symptoms (vomiting, diarrhea, abdominal pain), 7 both rash and GI symptoms, 1 wheezing, 1 anaphylaxis, 14(16%) identified by allergy testing only (egg reaction data was unavailable in 15 patients).

There were no cases of pruritus, rash, hypotension, angioedema, or anaphylaxis from propofol administration. There were three incidences of bronchospasm requiring treatment with albuterol, but these patients had a history of asthma, and no respiratory symptoms in their reaction to egg.

Conclusion:

To our knowledge, this is the largest study on propofol use in egg-allergic patients.

Propofol sedation for endoscopy has many advantages over general anesthesia, including fast onset and recovery time, improved cost-effectiveness, less waste, and reduced risk of bronchospasm and laryngospasm. In our patient population with high allergic and atopic burden, including one patient with anaphylaxis to egg, propofol was safely administered for sedation during endoscopy.

References:

1. Murphy A, Campbell DE, Baines D, Mehr S. Allergic Reactions to Propofol in Egg-Allergic Children, Anesthesia & Analgesia. 2011 July; 113(1): 140-144.

2. Hofer, K. et al. Possible Anaphylaxis after Propofol in a Child with Food Allergy. *Ann Pharmacother* 2003;37:398-401.
 3. Laxenaire, M-C. et al. Life-threatening Anaphylactoid Reactions to Propofol (Diprivan). *Anesthesiology* 1992 77: 275-280.
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