



Correspondence

Management of anaphylaxis and allergies in patients with long QT syndrome



Thank you to you and your colleagues for your valuable and thoughtful paper, “Management of anaphylaxis and allergies in patients with long QT syndrome.”¹ Because high-dose antihistamine therapy for chronic urticaria has become increasingly common, we have been considering what (if any) precautions should be taken before prescribing that to a patient, including such seemingly “routine” measures (not routine in an allergist’s office), such as getting an electrocardiogram on anyone getting an antihistamine, which is surely a lot of patients. Our take on the literature was that is not needed, as you appeared to conclude. No mention is made in your table of diphenhydramine, which I would guess may be the most common choice in the United States. I presume you have another favorite for rapid onset and potency.

However, you also raised another issue, as relates to the appropriate use of epinephrine, whether it be for someone in the office getting allergen immunotherapy or a patient with a history of food or insect hypersensitivity being prescribed an epinephrine injector. Patients in the latter group are encouraged to use their epinephrine soon after onset of symptoms early, the common thinking being that if you wait too long you may have a poorer outcome.

*Up to Date*² says, “It is also important to treat anaphylaxis promptly because it appears to be most responsive to treatment [with epinephrine] in its early phases based on the observation that delayed epinephrine injection is associated with fatalities.” The 2011 Immunotherapy Practice Parameter³ does not mention long QT

interval, but they do say, “Risk factors for fatal immunotherapy-induced reactions include delayed administration of epinephrine.” They do not list a defibrillator or cardiac monitor among the equipment that should be available in the office when giving immunotherapy, nor is it listed by Dr. Lieberman in the 2015 Practice Parameter⁴ on anaphylaxis, published in the *Annals* (Table II-2; page 362). Debate has occurred in the *Annals* and elsewhere about long QT and its risk for adverse outcomes in allergy-related therapies. No statement has been made that I could find that relates to preparation for patients potentially getting epinephrine.

May I ask what precautions and practice you undertake?

John R. Cohn, MD
Allergy and Immunology Section, Division of Pulmonary, Allergy and Critical Care Medicine, The Jane and Leonard Korman Respiratory Institute, Sidney Kimmel Medical College at Thomas Jefferson University Jefferson Asthma Allergy & Immunology, Philadelphia Pennsylvania
John.Cohn@jefferson.edu

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Disclosures: None.

Funding Sources: None.

Author response



Thank you for your feedback regarding our article.¹ The following are responses to your queries and comments.

Electrocardiogram Screening before Use of High-Dose Antihistamines

We agree with you. In our opinion, performing an electrocardiogram (ECG) in every patient with need of high-dose antihistamines

makes no sense. This is particularly relevant because an ECG can be normal even in patients with later genetically confirmed long QT syndrome (LQTS). However, we think it will be beneficial to screen patients addressing patient’s and family history during consultation before administration of high-dose antihistamines. The screening questions can be adapted to the Schwartz Score, such as: “Have you ever had a syncope before—with/without stress? Do you know whether you have suffered from congenital deafness? Do you know whether any family members have an LQTS? Is there an unexplained sudden death in young members of your family?” Also, a check of

Disclosures: none.

Funding Sources: none.

concomitant medication that could inhibit the metabolism of antihistamines is important.

With positive answers to these question, performing an ECG before administration of high-dose antihistamines could be beneficial, despite the new antihistamines seeming to be safe even in higher doses.

For levocetirizine and fexofenadine, we have found studies reporting that even in higher dosages (6- to 10-fold higher than recommended), no side effects appear.¹

Diphenhydramine

We have not mentioned diphenhydramine because in Switzerland and in Germany we do not use this drug normally anymore for treating allergic symptoms due to sedative side effect.

During localized allergic symptoms, we use as first choice—particularly in children—levocetirizine.

We are not specialists in treating chronic urticaria, therefore we have only very limited experience. Up to now, in the last 2 years we have seen only one adolescent with chronic urticaria who was treated with fexofenadine as recommended by allergology department.

Epinephrine and Precaution

We think this is a very important topic; however, this is not a question that is easy to answer. To be honest, at the moment, we have not established a guideline for that in our clinic. While preparing this manuscript we have begun discussing that topic interdisciplinary. Currently, in patients suffering from idiopathic LQTS (iLQTS) with an additional risk for allergies (neurodermitis, positive family history), we evaluate together with our allergologist the risk of potential allergy and start with early diagnostic to define risk of allergy. When patients are at high risk for severe allergic reactions, we discuss together what is the best management for that patient, and whether an indication for implementation of an automatic implantable cardioverter-defibrillator is present. Furthermore, we educate patients and parents to recognize early symptoms of allergy.

Because epinephrine is a very potent medication to reverse the effects of an allergic reaction, we instruct all patients with risk of severe allergies in the handling and use of injectable epinephrine devices. Furthermore, they are given these devices to carry with them and to keep at home. We recommend to all patients with

iLQTS and allergies that they immediately seek urgent medical care if they have contact with a potential allergen (eg, nuts if a nut allergy is known) or if they detect early symptoms of an allergy. With systemic signs of allergic reactions, we recommend that they administer the injectable epinephrine, even when emergency equipment is not present for cardiac monitoring during administration. We believe this adheres to the principle “treat first what kills first.”

Moreover, all patients should have an emergency card so that emergency department personnel can know the diagnosis, risk, and personalized treatment approach.

I hope this information might be helpful for you and answers your questions.

Tatjana Welzel, MD^{*,†}

Victoria C. Ziesenitz, MD^{*,‡}

Stefanie Seitz, MD[§]

Birgit Donner, MD, PhD[§]

Johannes N. van den Anker, MD, PhD^{*,¶}

^{*}Pediatric Pharmacology and Pharmacometrics

University Children's Hospital Basel (UKBB)

University of Basel

Basel, Switzerland

[†]Pediatric Rheumatology

University Children's Hospital Basel (UKBB)

University of Basel

Basel, Switzerland

[‡]Pediatric Cardiology & Congenital Heart Diseases

University Children's Hospital Heidelberg

Heidelberg, Germany

[§]Pediatric Cardiology

University Children's Hospital Basel (UKBB)

University of Basel

Basel, Switzerland

[¶]Division of Clinical Pharmacology

Children's National Health System

Washington, DC

tatjana.welzel@ukbb.ch

Reference

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