LONG-TERM TREATMENT WITH CETIRIZINE OF INFANTS WITH ATOPIC DERMATITIS: A MULTI-COUNTRY, DOUBLE-BLIND, RANDOMIZED, PLACEBO-CONTROLLED TRIAL (THE ETAC TRIAL) OVER 18 MONTHS


Purpose of the Study. To analyze the effects of long-term use of cetirizine on the severity, natural history, and treatment of atopic dermatitis (AD).

Study Population. A total of 795 infants, 12 to 24 months old, with active AD for at least 1 month and 1 parent or sibling with a history of AD, allergic rhinitis, or asthma were enrolled from 12 European countries and Canada.

Methods. This was a prospective, randomized, double-blind, parallel-group study comparing cetirizine with placebo in infants with AD and a family history of atopy. Systemic corticosteroids, cromoglycate, and oral antihistamines were discontinued; however, topical therapy for AD was continued. After a washout period, participants then received treatment with 0.25 mg/kg of cetirizine or placebo twice daily for 18 months. Follow-up visits were at 1 and 3 months, then every 13 weeks during the 18-month treatment period. At each visit, atopy status, severity of AD based on the SCORAD index (an objective rating scale used to determine AD severity), concomitant therapy and adverse experiences were recorded. Blood and urine samples were followed throughout the study to evaluate total and specific immunoglobulin E (IgE) and eosinophil counts.

Results. During the treatment period, participants in both groups had a steady decline in the severity of AD based on both the subjective symptom score and SCORAD index. Although this decline was statistically significant (P < .001), no difference was observed between study groups. There were no specific recommendations or restrictions for additional therapy for AD during the treatment period, and significantly more participants in the placebo group were treated with additional oral H1 antihistamines when compared with the treatment group (25% vs 19%; P = .03). There was no statistically significant difference observed in topical steroid use between groups; however, the duration of moderate-to-strong topical steroids (class II–IV) was longer in the placebo group (25% of the days vs 18%; P = .067). This relative corticosteroid-sparing effect was statistically significant for infants with severe disease (SCORAD index ≥25) at baseline (35% of days vs 26%; P = .014). The number of participants who developed urticaria was significantly lower in the treatment group than placebo (5.8% vs. 16%; P < .001). There were no significant differences in the occurrence of other adverse events between groups.

Conclusions. The use of cetirizine in infants with AD appears to be safe and significantly reduces the use of additional H1 antihistamines and the occurrence of urticaria. Results also suggest that cetirizine has a relative corticosteroid-sparing effect by decreasing the duration of moderate-to-potent topical steroid use.

Reviewers’ Comments. Oral antihistamine therapy has become a major component of the treatment of AD based largely on anecdotal experience. This is the first large prospective study evaluating the long-term efficacy and safety of treatment of AD with cetirizine in an atopic population. Cetirizine proved to be safe as patients in the treatment group did not experience significantly more adverse reactions, but, in fact, had a significantly decreased risk of urticaria. One limitation of this study was the lack of restriction of additional antihistamines during the treatment period. Significantly more patients on placebo used H1 antihistamines, and this suggests that antihistamine therapy is an effective, if not essential, component in the treatment of AD. It is likely that more significant differences in topical or systemic steroid use, concomitant medication use, or disease severity may have been observed between groups if this class of drugs was restricted. Patients in the treatment group had fewer days of moderate-to-potent topical steroid use, and this difference was statistically significant in severe disease further supporting the use of antihistamines as an effective component in the management of AD. Because this study was a part of the ETAC trial, the primary endpoint for efficacy was asthma with secondary endpoints for efficacy in the duration and severity of AD. Future studies designed with efficacy for treatment of AD as the primary endpoint with more specific restrictions and limitations on concomitant therapy would also be very useful.

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DRUG ALLERGY

LACK OF PENICILLIN RESENSITIZATION IN PATIENTS WITH A HISTORY OF PENICILLIN ALLERGY AFTER RECEIVING REPEATED PENICILLIN COURSES


Purpose of the Study. To determine the rate of penicillin (PCN) re sensitization in adults with a history of PCN allergy after exposure to multiple courses of PCN.

Study Population. Fifty-three adults with a clinical history consistent with an acute, immunoglobulin E (IgE)-mediated reaction to PCN.

Methods. Adults >18 years of age who had a history consistent with an acute, IgE-mediated reaction to PCN were recruited for the study. Participants underwent PCN
skin testing and those with negative skin tests received 250 mg of PCN orally. Study participants were then provided with a 10-day course of PCN to continue at home. After completion of the 10-day course of PCN, the participants returned for repeat skin testing and if the test continued to be negative, they repeated a 10-day course of PCN. This process continued until three 10-day courses of PCN had been completed and the participants had undergone a total of 4 sets of PCN skin tests.

Results. Fifty-eight participants met entry criteria for the study and underwent PCN skin testing. Five (9%) participants had positive PCN skin tests and were excluded from further participation. Of the 53 who continued in the study, 25 (47%) gave a prior history of urticaria or angioedema after taking penicillin, 9 (17%) reported anaphylaxis, and 19 (36%) reported a pruritic rash. The mean length of time since the most recent PCN reaction was 25 years. Forty-six participants completed the protocol and all tolerated the 3 courses of PCN and maintained negative skin test results. This resensitization rate of 0% had an upper limit of the 95% confidence interval (CI) of 2.1%. Of the 7 participants who withdrew from the study, 2 relocated, 1 decided not to continue, 1 had a vaginal yeast infection, 1 was lost to follow-up, and 2 had adverse reactions that ultimately proved not to be IgE-mediated as evidenced by subsequent negative PCN skin tests in both.

Conclusions. This study is the first to report that adults with a history of PCN allergy, who subsequently have negative PCN skin tests, are not at increased risk of PCN resensitization after multiple courses of the antibiotic.

Reviews’ Comments. Studies performed in children have been mixed, but this study offers data to support repeat administration of PCN to this group of adults. However, the criteria for PCN allergy in this study are based solely on participant history and this suboptimal case definition may result in a study population that includes those whose prior reactions were not IgE-mediated. Should that be the case, the number of participants who became resensitized could be falsely low. Ultimately, the risk of PCN resensitization should be studied in those for whom there is documentation of both a clinical reaction and IgE to PCN.

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LATEX ALLERGY

THE EFFICACY OF LATEX AVOIDANCE FOR PRIMARY PREVENTION OF LATEX SENSITIZATION IN CHILDREN WITH SPINA BIFIDA


Purpose of the Study. Sensitivity to latex or natural rubber is very common in children with spina bifida (SB). The American Academy of Allergy, Asthma, and Immunology (AAAAI) has recommended a latex-free environment for all procedures performed on SB patients as a means of preventing latex allergy. The purpose of this study was to assess the efficacy of latex avoidance for primary prevention of latex sensitization.

Study Population. Two groups of patients with spina bifida were selected for study. The 15 group I patients received no preventative measures. They represent the natural history of latex sensitization. The 22 group II patients were born later when latex-free measures had been implemented at the study site and parental education for latex avoidance was routine. Children were followed for a 6-year period. When >1 evaluation was done, the latest was used.

Methods. Data were recorded regarding gender, age, personal and family atopic history, number of operations, number of cystourethrograms, presence of ventriculoperitoneal (VP) shunt, and clinical reaction to latex. Allergy testing was done in vitro and by skin prick testing to commercial latex extract, banana and chestnut. These foods are among those that can cross-react to latex. A total serum immunoglobulin E (IgE) was also measured. Comparisons for the above parameters were made between the 2 groups of SB patients.

Results. There were no significant differences in the above parameters between the 2 groups except for the prevalence of latex sensitization and clinical latex reactions. Latex sensitization occurred in 27% of group I patients (no prophylaxis) versus 4.5% of group II patients (prophylaxis). None of the patients had a positive allergy test or clinical sensitivity to banana or chestnut. A total of 5 patients had a clinical latex reaction. Only 1 patient was from group II and all 5 patients had VP shunts. All of these patients had evidence of latex sensitivity by either a positive prick test or positive in vitro test.

Conclusions. Latex avoidance reduced the prevalence of latex sensitivity by 6-fold.

Reviewer’s Comments. The number of patients in this study was small, as were the number of operations and cystourethrograms. Latex exposure in group I patients is less than reported elsewhere. In other studies of children with SB or congenital urogenital malformations multiple surgeries or frequent exposure to latex devices are risk factors for sensitization. In this study the mean number of operations was 3.3 ± 1.5 for group I and 2.8 ± 2.3 for group II. Only 37 of 137 SB patients followed by this group were reported. No information was given as to the prevalence of clinical latex allergy reactions for entire cohort. The reduced sensitization in the latex avoidance group supports the recommendations of the AAAAI for early and sustained latex avoidance for such patients.

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IMPACT OF REPEATED SURGICAL PROCEDURES ON THE INCIDENCE AND PREVALENCE OF LATEX ALLERGY: A PROSPECTIVE STUDY OF 1263 CHILDREN

Hourihan, JO, Allard JM, Wade AM, McEwan AI, Strobel S. J Pediatr. 2002;140:479–482

Purpose of the Study. Latex sensitization can occur in up to 70% of children who require repeated surgeries for spina bifida or bladder extrophy. Primary prophylaxis is the best approach to reduce the risk of sensitization, while secondary prophylaxis of sensitized children reduces the risk for latex allergic reactions. The purpose of this study was to determine prospectively the prevalence of latex sensitivity and latex allergic reactions in children admitted to a surgical referral center for elective surgery.

Study Population. Patients were eligible if they were undergoing elective surgery under general anesthesia. After screening, a final group of 1263 children were enrolled before their first operation during the study period. The median age at the time of enrollment was 6 years. Fifty-nine percent were males.

Methods. Before each surgery latex-specific immunoglobulin E (IgE) was measured in vitro (Pharmacia UNI-
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