Research Days

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# Evaluation Of The Outcomes Of Oral Challenges To Azithromycin, Cephalexin And Trimethoprim-Sulfamethoxazole In Pediatrics

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**Rationale:** Antibiotic hypersensitivity complicates treatment for various infections and leads to long-term healthcare costs and antibiotic resistance. Data regarding the outcomes of oral challenges to trimethoprim-sulfamethoxazole, azithromycin and cephalexin are limited in Pediatrics. The goal of this study was to characterize the outcomes and safety of oral challenges to these antibiotics in Pediatrics.

**Methods:** A retrospective chart review was performed of pediatric patients who underwent oral challenges to cephalexin, azithromycin and trimethoprim-sulfamethoxazole in Allergy Clinic over the last 12 years.

**Results:** Ten patients underwent oral challenge to trimethoprim-sulfamethoxazole and all were successful. Thirteen patients underwent oral challenge to azithromycin and twelve were successful. One patient failed the oral challenge with development of urticaria within 5 minutes on first dose. Twelve patients underwent oral challenge to cephalexin. Ten patients successfully passed the oral challenge while two failed. Of the two who failed, one patient later developed signs of viral illness and the second developed pruritic rash shortly after first dose and was transitioned to a desensitization protocol.

**Conclusions:** Hypersensitivity to trimethoprim-sulfamethoxazole, azithromycin and cephalexin have significant impact on treatment for infections and require evaluation and de-labeling if possible. Overall, this study demonstrated that oral challenge to azithromycin, cephalexin and trimethoprim-sulfamethoxazole is a safe procedure to perform in select pediatric patients and can be done safely in the outpatient setting.