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Hannah N. Neuhaus

Children's Mercy Hospital

Salman Aljubran

Children's Mercy Hospital

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Evaluation of the Outcomes of Trimethoprim-Sulfamethoxazole Oral Challenges in the Pediatric Population

Hannah Neuhaus, MD and Salman Aljubran, MD

Children's Mercy Kansas City

Introduction

- Trimethoprim-sulfamethoxazole allergy can complicate treatment for various infections. While trimethoprim-sulfamethoxazole hypersensitivity, desensitization/oral challenges are frequently reported in adults, data is limited on the outcomes/safety of oral challenges to trimethoprim-sulfamethoxazole in Pediatrics. The goal of this study was to characterize the outcomes and safety of trimethoprim-sulfamethoxazole oral challenges in Pediatrics.

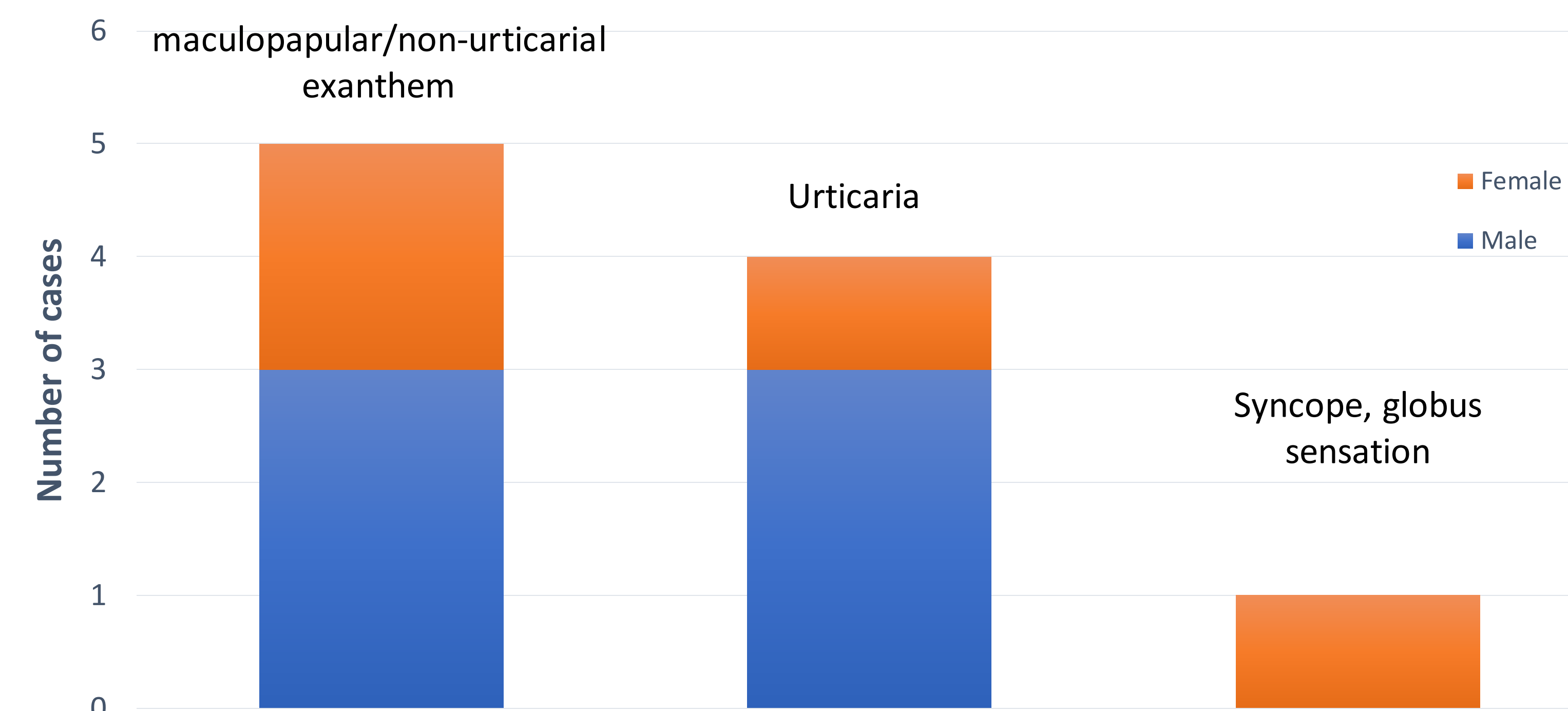
Methods

- An IRB-exempt retrospective chart review was performed of pediatric patients who underwent oral challenge to trimethoprim-sulfamethoxazole in Allergy Clinic over the last 12 years. We assessed characteristics including age, sex, reaction (IgE-mediated/non-IgE-mediated/indeterminate), skin testing, challenge outcome and complications to draw a conclusion regarding the overall safety of the procedure in the pediatric population.

Results

- Eleven patients were identified who underwent trimethoprim-sulfamethoxazole skin testing and/or oral challenge. Two reactions were consistent with an IgE-mediated process while the remainder were non-IgE-mediated/indeterminate. Two underwent skin testing to trimethoprim-sulfamethoxazole; both negative. Ten patients underwent successful oral challenge to trimethoprim-sulfamethoxazole; the eleventh patient was lost to follow-up after skin testing.

Reaction history prior to challenge



Conclusion

- Trimethoprim-sulfamethoxazole hypersensitivity is infrequently evaluated in the Pediatrics. However, trimethoprim-sulfamethoxazole is an effective antibiotic and reported allergy limits treatment for infections. Evaluation of the initial reaction is necessary, as many patients have non-IgE-mediated/indeterminate reactions. Severe cutaneous adverse reactions should be evaluated for when considering candidates for oral challenge to trimethoprim-sulfamethoxazole as oral challenge is contraindicated in these patients. Overall, this study demonstrated that oral challenge to trimethoprim-sulfamethoxazole is a safe procedure to perform in select pediatric patients and can be done safely in the outpatient setting. One limitation was small sample size.