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Evaluation Of The Outcomes Of Oral Challenges to Azithromycin, Cephalexin And Trimethoprim-Sulfamethoxazole

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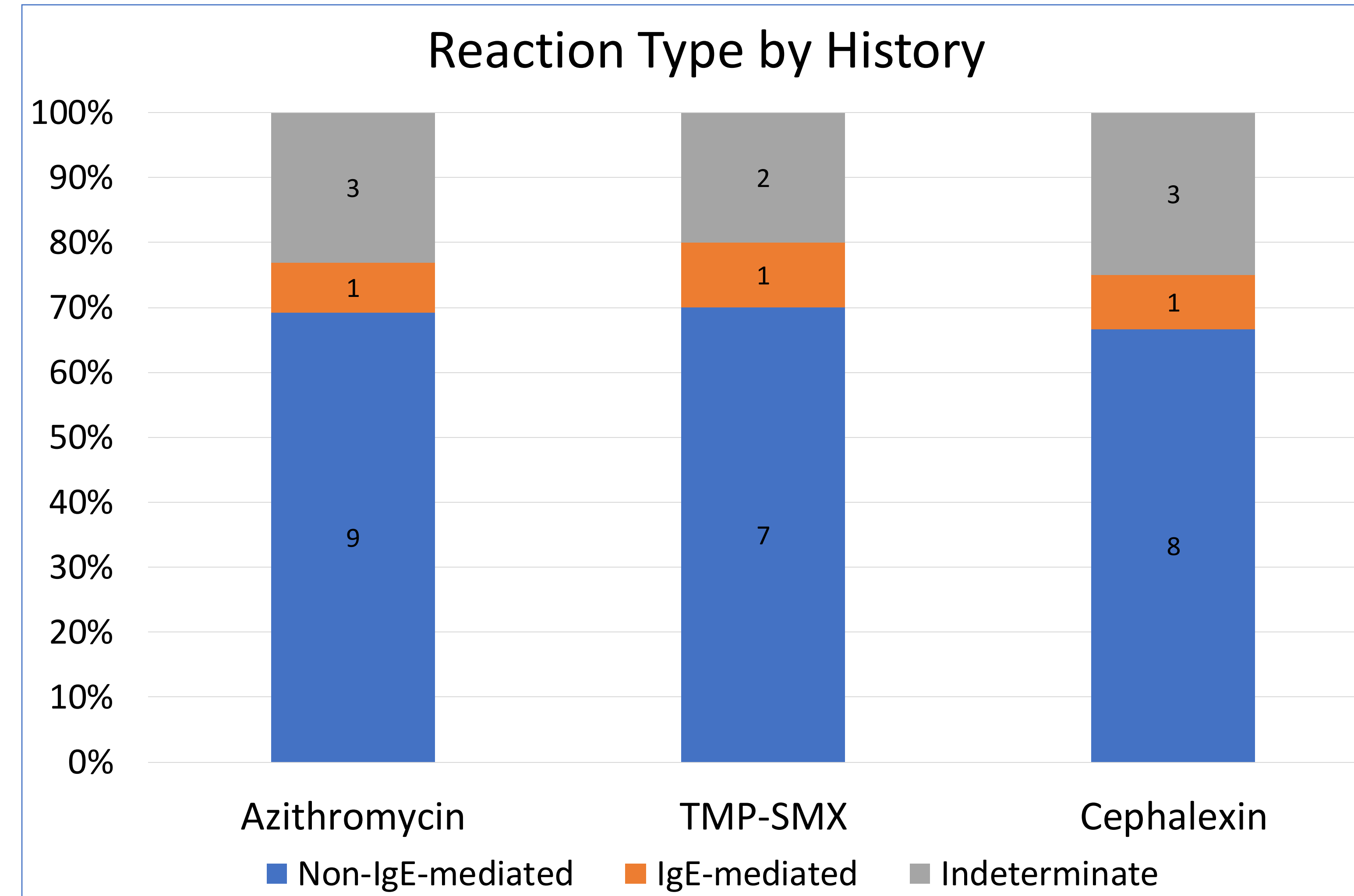
Rationale

- Antibiotic hypersensitivity complicates treatment for various infections and leads to long-term healthcare costs and antibiotic resistance¹.
- Data regarding the outcomes of oral challenges to trimethoprim-sulfamethoxazole, azithromycin and cephalexin are limited in Pediatrics².
- 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 passed. Thirteen patients underwent oral challenge to azithromycin and twelve were successful. One patient failed the oral challenge with development of urticaria following the first dose. Twelve patients underwent oral challenge to cephalexin; ten passed. 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.

Conclusion

- 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.

References

1. Baggs J, Fridkin SK, Pollack LA, Srinivasan A, Jernigan JA. Estimating national trends in inpatient antibiotic use among US hospitals from 2006 to 2012. *JAMA Intern Med.* 2016;176(11):1639-48.
2. Norton, A.E, Konvinse, K., Phillips, E.J., et al. Antibiotic Allergy in Pediatrics. *Pediatrics.* 2018; 141(5): e20172497. <https://doi.org/10.1542/peds.2017-2497>.