185 Evaluating a Penicillin Allergy Clinical Decision-Making Tool to Enhance Penicillin Allergy De-labeling

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RATIONALE: Patient-reported penicillin allergy is associated with inappropriate prescribing, increased antibiotic resistance and adverse patient outcomes. We aim to evaluate a validated clinical decision-making tool (PEN-FAST) in risk stratifying reported penicillin allergies for penicillin allergy de-labeling.

METHODS: A retrospective chart review of patients with reported penicillin allergies was completed for patients who underwent penicillin allergy testing from 10/9/2020-7/10/2022 at a single tertiary-referral healthcare system. PEN-FAST scores were compared to testing results.

RESULTS: Penicillin allergy evaluations were completed in 117 patients (93 [79.5%] female; median age 54 [38.75-67] years; 48 [41.0%] with atopy). Most patients (102, 87.2%) had skin testing first, while 15 (12.8%) had direct challenges (DC). Patients who received DC had PEN-FAST scores 0-1 and none had reactions. Eighty-six (73.5%) patients had PEN-FAST scores ≤2, indicating low risk, and all had negative testing. Four (3.4%) patients tested positive; 2 had positive skin tests (PEN-FAST 3, 3) and 2 had negative skin tests but failed oral challenges (PEN-FAST 3, 5). In predicting a positive penicillin allergy test, PEN-FAST scores of ≤2 had sensitivity, specificity, negative predictive value and positive likelihood ratio of 100% (95% CI 39.76-100%), 75.22% (95% CI 66.22-82.86%), 100%, and 4.04 (95% CI 2.93-5.56), respectively. The area under the Receiver Operating Characteristic curve was 0.903.

CONCLUSIONS: Direct Challenges are underutilized in penicillin allergy evaluations despite most histories being low risk in tested patients. A PEN-FAST score of ≤2 is associated with a high negative predictive value in our cohort and can be used to encourage DC and enhance penicillin allergy de-labeling.

186 Post Amoxicillin Challenge Hypersensitivity Reactions Are Mild And Similar To Their Index Reactions

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RATIONALE: Amoxicillin is one of the most used antibiotics in pediatric ambulatory care and allergic reactions can be distressing to families. However, it is important to evaluate if the reactions represents a true hypersensitivity reaction.

METHODS: We did a retrospective survey of amoxicillin challenge outcomes (in office challenges and extended home challenges) over the past three years in a single pediatric acute care facility. Out of 1450 patients in the registry, we identified 84 patient who had allergic or indeterminate (defined as subjective non progressive signs or a confounding medical history) challenges. We obtained data for time of onset of reaction, symptoms, rash phenotype (urticarial or non-urticarial) and similarity to previous reactions.

RESULTS: In 84 children, 61 had allergic symptoms. 72% of allergic reactions occured after one hour observation peroid or during the extended home challenge. The most common symptoms were urticarial rash (51%), non-urticarial rash (43%) and pruritus (46%). Greater than 50% of children who presented with urticarial rash or non-urticarial rash had similar rash phenotypes to their index reactions. One child had non-urticarial rash, vomiting, diarrhea and pruritus indicating anaphylaxis but symptoms were staggered over a couple of days and was treated with antihistamines and topical steroid.

CONCLUSIONS: "In office" amoxicillin challenge is a reasonable tool to screen for type 1 hypersensitivity reactions but most patients have mild allergic symptoms after leaving the clinic. It would be important to further evaluate if these reactions are true allergies and if not, delabel patients for more utilization of amoxicillin when needed.

187 Proportion of Referred Patients Who Completed Recommended Drug Allergy Evaluation

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RATIONALE: Drug allergies are a frequent reason for referral to allergy/immunology and are an important source of morbidity and mortality. While patients are often de-labeled by allergists via skin testing (ST) and/or oral challenges (OC), this typically requires a second visit. We sought to evaluate the proportion of patients referred to a tertiary care academic allergy practice for drug allergy who completed evaluation.

METHODS: This was a one-year retrospective chart review of all patients referred to our adult allergy clinic for drug allergy evaluation. Demographics, drug allergy history, recommendations for diagnostic evaluation, and challenge results were collected.

RESULTS: Of 198 patients who were referred for drug allergy evaluation, 124(63%) were recommended to return for OC or ST. The remaining patients were cleared by history alone [n=40(20%)], instructed to avoid due to likely allergy [24 (12%)], admitted for desensitization [4(2%)], or had multiple recommendations not requiring follow-up [6(3%)]. Of those who required follow-up for OC or ST, only 61% completed their visit. Of the 48 patients who did not return, 69% never scheduled the visit. Antibiotics contributed to 53% of drug allergy referrals. Patients who completed their diagnostic testing visit were able to be de-labeled of the drug allergy 91% of the time.

CONCLUSIONS: Drug allergy testing often results in successful de-labeling. A large proportion of drug allergic patients who were evaluated by an allergist never completed recommended diagnostic testing. Additional strategies are needed to identify and minimize barriers to follow up.