SATURDAY

354 The role of HLA B*13:01 and HLA B*15:02 for predicting sulfonamide/trimethoprim-induced Severe Cutaneous Adverse Reactions (SCARs)

Kanokkarn Pinyopornpanish, MD[1], Wannada Laisuan, MD[2]; [1]Division of Allergy and immunology, Ramathibodi, [2]Ramathibodi Hospital, Mahidol University.

RATIONALE: Sulfonamide/trimethoprim or Bactrim is widely used for prophylaxis of bacterial and fungal infection on several occasions. However, Bactrim-induced severe cutaneous adverse reactions (SCARs), such as Stevens-Johnson syndrome (SJS), toxic epidermal necrolysis (TEN), and drug reaction with eosinophilia and systemic syndrome (DRESS), can be observed. Human leukocyte antigen (HLA) gene testing might be a helpful test laboratory to predict the adverse reactions.

METHODS: A retrospective study case-control study was conducted in the allergy unit of Mahidol University, a tertiary care unit in Thailand, using the data of patients who received Bactrim between January 2015 and December 2020. This study enrolled 12 patients with sulfonamide/trimethoprim-SCAR and 12 control individuals. HLA B*13:01 and HLA B*15:02 were screened. Categorical data were compared between groups with the use of Fisher's exact tests.

RESULTS: A total of 24 cases were included in the study, 12 in SCARs group (1 TEN, 4 SJS and 7 DRESS) and the other 12 in no reaction group. There was no difference in HLA B*13:01 or HLA B*15:02 detection ratio between the SCARs (33.33%) and control (50 %) groups (p 0.680). Subgroup analysis of HLA B*13:01 in DRESS was significantly detected in 71.4% of DRESS compared with 16.7 % in the control group (p= 0.045), while there was no significant difference of HLA-B* 15:02 in normal group and SJS/TEN patients (16.7% vs 20%; normal group vs SJS/TEN group respectively; p 1.000).

CONCLUSIONS: Sulfonamide/trimethoprim-DRESS is strongly associated with a genetic predisposition, especially HLA B*13:01.

355 Utility And Safety of Drug Provocation Testing in Pediatric Ibuprofen Allergy

Ibtihal Alotaibi, MD[1], Ana Maria Copaescu, MD[2], Luca Delli Colli, BSc[3], Moshe Ben-Shoshan, MD FAAAAI[2], Judy Gaffar[4]; [1]1. Central Second Health Cluster, Ministry of Health, Riyadh, Saudi Arabia. 2. McGill University Health Center, McGill University, McGill University Health Centre (MUHC), Montreal, Quebec, Canada, [2]The Research Institute of the McGill University Health Centre, McGill University, McGill University Health Centre (MUHC), Montreal, Quebec, Canada, [3]McGill University, McGill University Health Centre (MUHC), Montreal, Quebec, Canada, [4]McGill University Health Centre, Montreal, Quebec, Canada.

RATIONALE: There is limited research on the diagnosis and management of Ibuprofen associated reactions in children. The aim of this study was to determine the likelihood of Ibuprofen allergy following a graded oral challenge (GOC).

METHODS: In this cohort, we prospectively recruited pediatric patients referred to Montreal Children's hospital for a suspected NSAIDs allergy between January 2017 to August 2022. A standardized questionnaire was used for collecting data on clinical symptoms, treatment, associated factors and NSAID oral drug provocation test (10% followed by a 90% oral dose; 1-hour observation).

RESULTS: Among the 72 children reporting an Ibuprofen allergy, 39(54.2%) were males with a median age of 5.7 years [Interquartile range (IQR) 3.10,11.2]. The majority of the reactions [64 (88.9%)] occurred after 1-3 days of treatment. Symptoms started within one hour following the last dose in [49(68.1%)] patients. The most commonly reported symptom was angioedema [43(59.7%)] followed by urticaria [24(33.3%)]. Most reactions [67(93.1%)] occurred outside the hospital, 34(47.2%) patients were evaluated in the emergency department, and 14 (19.43%) required IM Epinephrine.

Of the 68 patients who completed direct GOCs, 12(17.6%) had immediate reactions, of which 7(10.3%) met the criteria for anaphylaxis, and 4(5.88%) had non-immediate reactions manifested by hives in the first 8 hours and lasting 1-3 days. There was no association between a positive GOC and age, sex, the timing or the severity of the reaction.

CONCLUSIONS: Direct graded oral challenge is effective for the diagnosis of Ibuprofen allergy in children. However, it is associate with a relatively high risk of anaphylaxis.

356 Basophil activation test may help achieve a better diagnosis in patients with hypersensitivity reactions to chemotherapeutics

Gador Bogas Herrera, MD[1], Adriana Ariza Veguillas, PhD[2], Marina Labella[3], Inmaculada Doña[4], Maria Salas[3], Ruben Fernandez-Santamaria[5], Jose Antonio Céspedes[5], Cecilia Frecha[5], silvia calvo-serrano[5], Maria de los Reyes Garcia-Otón[5], Maria Isabel Montañez[6], Cristobalina Mayorga[7], Tahia D. Fernandez[8], Maria Jose Torres[8]; [1]Allergy Research Group, Instituto de Investigación Biomédica de Málaga-IBIMA; Allergy Unit, Hospital Regional Universitario de Málaga, [2]IBIMA, Regional University Hospital of M, [3]Allergy Unit, Hospital Regional Universitario de Málaga, [4]Allergy Unit, Hospital Regional Universitario de Málaga; Allergy Research Group, Instituto de Invest, [5]Allergy Research Group, Instituto de Investigación Biomédica de Málaga-IBIMA, [6]Nanostructures for Diagnosing and Treatment of Allergic Diseases Laboratory, Andalusian Center for N, [7]IBIMA, [8]Allergy Research Group, Instituto de Investigación Biomédica de Málaga-IBIMA; Departamento de Medici.

RATIONALE: Chemotherapeutics (CHTs) can induce a variety of hypersensitivity reactions (HSRs) that may be severe and affect further oncology treatments. Basophil activation test (BAT) could help to endotype these patients safely, but its diagnostic utility remains unknown. We aimed to evaluate the utility of BAT in our population.

METHODS: We included all patients referred to our Allergy Unit reporting immediate HSRs to taxanes and platinum compounds during 2020-2022. Clinical phenotyping relied on clinical history and skin test (ST), being patients included into Type-I, Cytokine release reaction (CRR), or Mixed groups. Severity was evaluated according to Brown's classification.Thirty non-allergic, non-exposed controls were also included.Drug provocation test was performed in mild/moderate negative-ST patients, and BAT in all individuals.

RESULTS: Ninety patients were prospectively recruited: 31 reported reactions to taxanes (18 docetaxel/13 paclitaxel), and 59 to platins (30 carboplatin/23 oxaliplatin/6 cisplatin). From them, 65.4% were finally considered as allergic. HSRs were consistent with Type-I in 37.1%, CRR in 41.3%, and Mixed in 21.6% of patients. Most patients developed moderate reactions (63%). BAT was positive in 55.3% of allergic patients, and negative in all of non-allergic and controls. BAT sensitivity and specificity were 53.8% and 95.5%, respectively, showing a significant correlation with ST (r=0.7).BAT was positive in 63% moderate, 34% severe, and 3% mild HSRs.BAT was positive in 60% of Type-I, 30% Mixed, and 10% CRR (p<0,05) of patients.

CONCLUSIONS: BAT seems useful for pheno-endotyping HSRs to CHTs in negative ST allergic type-I patients, and especially and importantly in those with moderate/severe HSRS.