231 Prevalence of sleep disorders in patients with Hereditary Angioedema

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RATIONALE: The consequences of impaired sleep vary across a wide spectrum, including exacerbated inflammation, mental and physical fatigue, mood disorders, daytime sleepiness, and poor quality of life. Limited information on the association between hereditary angioedema (HAE) and sleep disorders is available.

This study aims to investigate the prevalence of sleep disorders in HAE patients.

METHODS: We did an exploratory cross-sectional online study in patients with HAE from Mexico, Colombia, Peru, and Argentina. Data on demographic characteristics were recorded. To evaluate the activity of the disease we used Hereditary Angioedema Activity Score (HAE -AS). For sleep apnea, we included the STOP-BANG questionnaire, the GSAQ questionnaire for screening sleep disorders, and SATED for assessing sleep quality.

RESULTS: Twenty-four participants were included, 50% from Argentina, 25% from Colombia, 17% from Peru, and 8% from Mexico. 75% had HAE type 1, 8% type 2 and 17% did not remember their type. 33% of all participants were categorized as severe by the HAE-AS. The majority of sleep disorders occurred in the non-severe HAE group. Intermediate and high-risk OSA (54%) and insomnia (33%) were the most common sleep disorders in both categories, other sleep disorders were secondary to anxiety, depression, and systemic condition. When assessing the quality of sleep, the SATED mean score was 5 with no statistical differences among both severe and non-severe patients.

CONCLUSIONS: These preliminary findings show that HAE patients have sleep disorders and poor sleep quality. Further assessment of potential sleep disorders should be implemented during the clinical approach of these patients.

232 The Role Of Serum Biomarkers In Predicting Response To Omalizumab Therapy In Patients With Chronic Spontaneous Urticaria

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RATIONALE: Omalizumab is approved for use as treatment for chronic spontaneous urticaria (CSU) refractory to high-dose antihistamine therapy. Previous studies suggest that high CU index (marker for FcER1alpha subunit antibodies) and low IgE predict poor response to omalizumab. This study investigated the real-world value of obtaining biomarkers to retrospectively predict responders and non-responders to this therapy.

METHODS: A single-center, retrospective chart review was conducted for patients with an ICD-10 diagnosis of CSU treated with omalizumab. Serum CU index and total IgE levels prior to initiation of omalizumab were inclusion criterion. Other serum biomarker data collected included antithyroid peroxidase antibody level, absolute eosinophil count, and C-reactive protein level. Available skin biopsy data was also collected. Clinical response to omalizumab therapy was assessed using the Outcome and Assessment Information Set (OASIS-D) symptom control scale used to assess treatment outcomes from electronic medical record data. Descriptive statistics were used to analyze the results.

RESULTS: A total of 38 patients were included in the study, with an average age of 40.4 +/- 16.4 years. The omalizumab no-response group included 62.5% high-CU patients and 76% low-total IgE patients, compared to 57.1% and 55.6%, respectively, for high omalizumab response group. The omalizumab partial response group included 37.5% high-CU patients and 71.4% low-total IgE patients.

CONCLUSIONS: Clinical biomarkers for predicting response to omalizumab in patients with CSU refractory to high-dose antihistamine therapy may be useful in discussing treatment options and expectation outcomes when starting omalizumab. Larger numbers of patients are required to verify these findings.

233 Differences in Anaphylaxis Reporting Among Cephalosporins: Analysis of the FDA Adverse Event Reporting System Database

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RATIONALE: Drug-induced anaphylaxis is a well-known adverse drug reaction. Cephalosporins are frequently implicated in antibiotic anaphylaxis but are diverse in structure. Previous research has identified that adverse reactions to oral cephalosporins may be less risky for true allergy when tested. Therefore, evaluation of cephalosporin anaphylaxis may need to prioritize certain drugs.

METHODS: We reviewed the publicly available FDA Adverse Event Reporting System (FAERS) database from 2012-2022. Using search terms "anaphylactic shock" "anaphylactic reaction" "anaphylactoid shock" and "anaphylactoid reaction" and sorting cases by generic drug names, we counted and trended reports in FAERS in which a cephalosporin was associated with anaphylaxis. We used a Proportional Reporting Ratio to look for drugs disproportionately associated with reports of anaphylaxis.

RESULTS: From 2012-2022, there were 46,430 reports of drug-induced anaphylaxis, of which 1,702 (3.6%) were associated with cephalosporins. Top cephalosporins associated with anaphylaxis in FAERS were cefazolin, cefoxitin, and cefuroxime. Top parenteral cephalosporins associated with anaphylaxis were cefazolin (n=346;PRR=55.65), cefoxitin (37;36.67), cefuroxime (423;31), ceftriaxone (367;13.13), and cefotaxime (34;8.96) and top oral cephalosporins were cefadroxil (n=29;PRR=27.03), cefuroxime-axetil (136;26.22), cefaclor(46;18.64), cephalexin (188;12.20) and cefprozil (8;11.75). Among cephalosporins, parenterally administered drugs (n=1270) were disproportionately associated with anaphylaxis among their reported adverse events compared to oral drugs (n=432).

CONCLUSIONS: In our review of FAERS data, we uncovered important themes and trends in reports of cephalosporin-associated anaphylaxis. Intravenous cephalosporins are disproportionately reported to be associated with anaphylaxis compared to oral cephalosporins and may therefore, represent a higher priority for standardized testing approaches.

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