Abstract: PB2844

Title: CONSENSUS ON THE DISEASE MANIFESTATIONS OF HYPEREOSINOPHILIC SYNDROME

Abstract Type: Publication Only

Topic: Myeloproliferative neoplasms - Clinical

Background:

Hypereosinophilic syndrome (HES) encompasses a group of a rare diseases characterized by persistent hypereosinophilia in the blood and tissue, associated with eosinophil-mediated organ damage and dysfunction. HES has diverse disease manifestations and symptoms vary in severity; a multidisciplinary team approach is optimal for patient management. Idiopathic HES (iHES) is the predominant variant, but regardless of etiology, patients with HES face debilitating symptoms, flare-ups, and comorbidities often requiring hospital admission and cycling between multiple healthcare professionals (HCPs), all of which contribute towards substantial disease burden and poor health outcomes.

Aims:

To promote an unbiased comprehension of, and HCP-wide consensus on, iHES disease phenotype and its disease manifestations.

Methods:

HCPs recruited from January–August 2023 participated in interviews and questionnaires. This study used the Jandhyala Method, a mixed-methods consensus-observing exercise with two phases: 1) an awareness round, to generate a comprehensive list of iHES disease manifestations via a systematic literature review (SLR; results in separate abstract) and HCP input via open-ended questions; and 2) a consensus round, to narrow down the most relevant manifestations via closed-ended questions to HCPs. All disease manifestations ("items") identified via the SLR and awareness questions were coded and scored to generate a condensed list of discrete items; these formed the basis of the consensus questions and HCPs rated their agreement with each on a 5-point Likert scale (strongly disagree–strongly agree). Items that reached a consensus index of ≥0.51 (>50% of HCPs in agreement) were retained in the final list of iHES disease manifestations. Prevalence rates were determined from the mean of HCP responses to open-ended prevalence questions.

Results:

By December 2023, 30 HCPs had been recruited and completed the awareness round; two HCPs (one from the UK and one from Germany) did not complete the consensus round. HCPs from a range of European countries participated in the study (UK [n=7], Germany [n=7], France [n=6], Italy [n=5], Belgium [n=3], and Switzerland [n=2]), with specialties as follows: hematology (n=7), internal medicine (n=5), cardiology (n=5), dermatology (n=4), pulmonology (n=3), immunology (n=2), gastroenterology (n=2), and ophthalmology (n=2). Collectively, throughout their careers the HCPs had managed 1235 patients with HES (median 13.5 per HCP, range 1–300) and in the prior 24 months had actively followed 475 patients (median 8 per HCP, range 1–105).

Of 314 disease manifestations identified in the awareness round, 269 (87.5%) were not mentioned spontaneously by HCPs in their questionnaire/interview responses; however, when presented in the consensus round, 83 (26.4%) items had full consensus and were included in the final list of disease manifestations. Disease manifestations with a prevalence of ≥25.0% were: fatigue (53.7%), asthenia (46.6%), discomfort (39.5%), dyspnea (35.0%), cough (32.7%), leukocytosis (27.6%), pruritus (27.1%), and sinonasal symptoms (25.7%). Additional manifestations included in the final list are shown in the **Table**.

Summary/Conclusion:

The findings from this study offer the most comprehensive understanding of the disease manifestations of HES

from a managing physician's viewpoint to date. The diverse clinical presentation constitutes an important challenge to early diagnosis and treatment.

Table. Disease manifestations of HES agreed upon in the consensus round classified by organ system (with consensus score 1–3 and >15.0% prevalence)*

Organ system and disease manifestation	Awareness score†	Consensus score‡	Prevalence,§ %
Blood and lymphatic system			
Leukocytosis	5	2	27.6
Gastrointestinal			
Anorexia (loss of appetite)	2	2	22.0
Weight loss	3	2	18.2
Nausea	2	2	17.8
Abdonimal pain	2	2	17.7
General			
Fatigue	2	2	53.7
Asthenia	3	3	46.6
Discomfort	3	2	39.5
Malaise	3	2	22.6
Lethargy	5	2	22.3
Sweats	3	3	19.7
Respiratory system			
Dyspnea	2	2	35.0
Cough	3	2	32.7
Sinonasal symptoms	5	2	25.7
Dry cough	5	2	23.9
Wheezing	5	2	20.0
Tachypnea	5	2	17.5
Skin			
Pruritus	2	2	27.1
Urticaria	3	2	18.4
Erythema	1	2	17.2
Papules	2	3	16.7

*One participant included L-HES patients in their prevalence estimations. Those estimations did not differ considerably from those of the other participants' iHES estimates, and as such, were included in the overall analysis.

†Awareness score assessed the participants' knowledge of common indicators in question, calculated by comparing the frequency occurrence of the items generated from the SLR to the participants' responses via open-ended questions. Awareness scores ranged from 1 (complete awareness) to 5 (no awareness).

‡Consensus score was calculated using the percentage of participant agreement with each statement during the structured questionnaire, which used closed-ended questions with a 5-point Likert scale (strongly disagree–strongly agree). If the percentage of respondents providing consensus to include an item exceeded 50%, the item was to be included in the dataset. Consensus scores ranged from 1 (complete consensus) to 5 (no consensus).

§Prevalence rates were determined by calculating the mean of all HCP responses to the open-ended prevalence questions.

HES, hypereosinophilic syndrome; iHES, idiopathic HES; HCP, healthcare professional; L-HES, lymphocytic variant of HES; SLR, systematic literature review.

Keywords: Phenotype, Hypereosinophilic syndrome, Quality of life, Myeloproliferative disorder