

Preface



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Guest Editor

Eosinophilia is a prominent feature of a wide variety of disorders, including allergic and atopic diseases, neoplasms, and helminth infections. However, the role of eosinophils in the pathogenesis of these disorders remains controversial. In contrast, hypereosinophilic syndromes (HES) are defined by the presence of marked eosinophilia (eosinophils $> 1500/\text{mm}^3$) and eosinophil-related end organ dysfunction. Consequently, HES provide a unique opportunity to study the relationship between eosinophil function, activation, and disease.

Whereas it was clear from the time of Chusid's classic definition in 1975 that HES are a heterogeneous group of disorders ranging from an aggressive myeloproliferative disease, reminiscent of leukemia, to a more benign form characterized by non life-threatening, but often times disabling, symptoms, it was not until recently that molecular and immunologic tests became available to identify specific etiologic subtypes of HES. These subtypes include a myeloproliferative variant associated with an interstitial deletion leading to a fusion tyrosine kinase (*FIP1L1/PDGFR α* -positive chronic eosinophilic leukemia) and a lymphocytic variant characterized by the presence of a clonal lymphocyte population secreting eosinophilopoietic cytokines. The identification of these subtypes has led to a reexamination of the definition, clinical manifestations, and treatment of HES. Nevertheless, despite our present diagnostic tools, as many as 50% of patients who have HES remain unclassified.

In this issue of *Immunology and Allergy Clinics of North America*, international experts in the field of eosinophilia provide in-depth reviews of the approach to diagnosis, clinical spectrum and end organ manifestations, and options for treatment of HES, taking into account the recently described HES subtypes. The information in this issue is intended not only to provide a guide for clinicians taking care of patients who have HES, but also to highlight the recent research advances and gaps in our understanding of these rare disorders.

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