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Healthcare Utilization of Patients with Hypereosinophilic Syndrome in Europe

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Introduction

HES is a rare group of blood disorders characterised by prolonged eosinophilia that can lead to tissue and organ damage.[1,2] Clinical manifestations of HES occur in multiple organ systems, most commonly the heart, nervous system, gastrointestinal tract, skin and lungs, owing to eosinophilic infiltration.[1-3]

The current standard of care comprises high-dose oral corticosteroids, despite the risks associated with high doses or long exposure and antineoplastic agents for those with more severe disease or who are unresponsive to steroids.[1-3]

Healthcare resource utilization (HCRU) is not well characterised in patients with HES, and data from clinical trials may not be representative of the general disease population encountered in real-world settings.

The aim of this retrospective chart review study was to describe HES-related HCRU among a real-world cohort of patients with HES in Europe.

Methods

Study design (GSK ID: 214657)

Real world | Retrospective | Chart review

Patient eligibility criteria

- ≥6 years of age
- Confirmed HES diagnosis
- ≥1 year of follow-up data from index

N=280

Index period*

First physician encounter after HES diagnosis: Jan 2015 to Dec 2019

HES diagnosis date | End of follow-up†

Abbreviated patient history‡ | Detailed natural course of disease§

Chart review conducted by 121 physicians in 5 European countries: France, Germany, Italy, Spain, UK

Study outcomes

- Length of stay
- HES-related hospitalisations and outpatient visits
- HES-related ER visits
- Monitoring of adverse effects of using IS medications

*Date of first physician encounter after HES diagnosis between January 2015 and December 2019; †earliest of death, loss to follow-up or date of chart abstraction; ‡as available in the patient's chart (e.g. demographics); §includes assessment of HCRU.

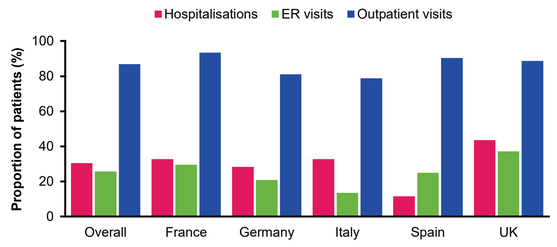
Results

Table 1. Patient demographics and clinical characteristics

	Overall (N=280)
Age at HES diagnosis, mean (SD), years	42.4 (16.2)
Male, n (%)	182 (65.0)
Country, n (%)	
France	61 (21.8)
Germany	53 (18.9)
Italy	52 (18.6)
Spain	52 (18.6)
UK	62 (22.1)
Disease subtype, n (%)	
Idiopathic	155 (55.4)
Lymphocytic	42 (15.0)
Myeloid	66 (23.6)
Other	2 (0.7)
Unknown	15 (5.4)
Disease duration*, mean (SD), years	4.0 (4.5)
Length of follow-up†, mean (SD), years	2.8 (1.4)
Comorbidities‡, n (%)	
Anxiety or depression	102 (36.4)
Asthma	126 (45.0)
Diabetes	35 (12.5)
Hypertension	91 (32.5)
Lower respiratory disease(s), other than asthma and COPD	39 (13.9)
Nasal polyps	91 (32.5)
Obesity	44 (15.7)
Osteoporosis	31 (11.1)
Vasculitis	47 (16.8)

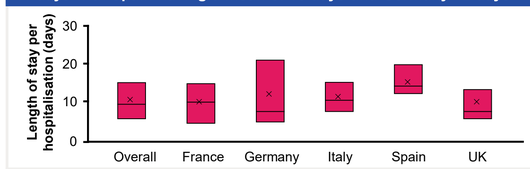
*Disease duration was calculated as the time between HES diagnosis and the end of follow-up; †length of follow-up was calculated as the time between index date and the end of follow-up; ‡comorbidities were assessed between HES diagnosis and the end of follow-up and are presented for those which represent ≥10% patients.

Figure 1. The proportion of patients with outpatient visits was consistently high across all countries, while the UK had the highest proportion of patients with hospital or ER visits*



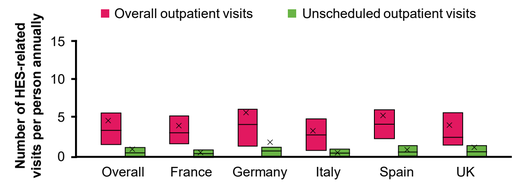
*HES-related visits were assessed during the detailed natural course of disease period between index date and the end of follow-up.

Figure 2. The mean length of stay per HES-related hospitalisation was 11 days with Spain having a mean of 15 days and Germany 12 days*



*HES-related visits were assessed during the detailed natural course of disease period between index date and the end of follow-up. Boxes represent median and interquartile range; X represent mean.

Figure 3. Overall, patients with HES attended >4 outpatient visits per year; German patients had a mean of almost 6 visits a year and Spanish patients had a mean of 5 visits a year*

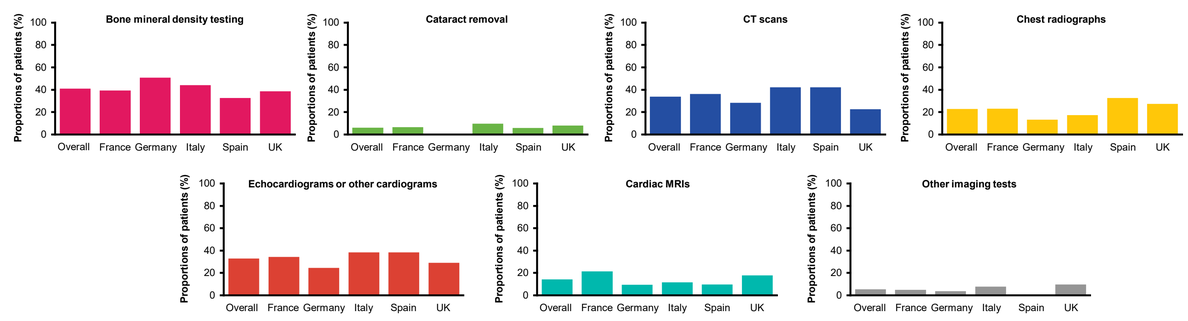


*HES-related visits were assessed during the detailed natural course of disease period between index date and the end of follow-up. Boxes represent median and interquartile range; X represent mean.

Conclusions

- These results demonstrate that in real-world clinical practice, patients with HES have substantial HCRU, including lengthy hospitalisations, ER visits and outpatient visits.
  - Almost 1 in 3 patients had a hospitalisation and the mean length of stay per hospitalisation was 11 days.
  - Over 86% of patients in the overall population required outpatient visits.
- There were also distinct differences in the HES-related healthcare burden across Europe; the UK had the highest proportion of patients needing hospitalisation (44%) or ER visits (37%). The differences observed in healthcare burden across Europe could be owing to country-specific guidelines, healthcare delivery and access to hospitals/emergency services.
- Monitoring of complications and adverse effects of immunosuppressive treatments was not consistently performed across all countries.
- These observations highlight the need for novel treatment strategies, to relieve the disease-related burden for patients with HES and to ameliorate the burden on healthcare systems.

Figure 4. Monitoring of complications or adverse effects when using immunosuppressive medications was not consistently performed in patients with HES, and varied by country



*HES-related tests were assessed during the detailed natural course of disease period between index date and the end of follow-up.

References

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Abbreviations

COPD, chronic obstructive pulmonary disease; CT, computed tomography; ER, emergency room; HCRU, healthcare resource utilization; HES, hypereosinophilic syndrome; MRI, magnetic resonance imaging; SD, standard deviation; UK, United Kingdom

Disclosures

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- This study was funded by GSK (GSK ID: 214657).
- **JH**, **NK**, **RA-C**, **LB**, **GR** and **RWJ** are employees of GSK and hold stocks in GSK. **SD**, **AK**, **LH** and **MSD** are employees of Analysis Group, Inc., which received GSK funding for this study. **LB** will present this Encore on behalf of all authors, with their permission, and is also a GSK employee and stakeholder.

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