**Introduction**

- Acute hepatic porphyria (AHP) is a family of rare, genetic diseases characterized by defects in genes encoding home biosynthetic pathway enzymes
- AHP comprises four subtypes: acute intermittent porphyria (AIP), variegate porphyria (VP), and hereditary coproporphyria (HCP), and α-aminolevulinate deficiency porphyria (ADP)  
- Patients with AHP can experience potentially life-threatening neuropsychiatric attacks (predominantly severe abdominal pain), debilitating chronic symptoms and serious long term complications
- This study aimed to characterize the disease manifestations and daily life impacts of AHP in patients with recurrent attacks (~10% of all patients) in Europe and the United States using data from the EXPLORE study

**Methods**

- EXPLORE (NCT02240794) is a prospective, international, observational study of the natural history and clinical management of symptomatic patients with AHP (Figure 1)

**Patient Demographics and Disposition**

- Overall, 112 patients from 21 centers (56% from 14 EU centers and 44% from 7 US centers) were enrolled 
- Baseline demographics and characteristics were comparable between the regional groups (Table 1)

**Results**

**Table 1: Patient Demographics and Baseline Characteristics**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>EU (n=63)</th>
<th>US (n=49)</th>
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</thead>
<tbody>
<tr>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td></td>
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<tr>
<td>Number of attacks</td>
<td>9.0 (10.6)</td>
<td>9.7 (3.2)</td>
</tr>
<tr>
<td>Number of attacks requiring hospitalization</td>
<td>3.2 (3.9)</td>
<td>3.5 (4.1)</td>
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<tr>
<td>Number of attacks requiring treatment at outpatient clinic or infusion center</td>
<td>3.9 (8.2)</td>
<td>3.7 (7.0)</td>
</tr>
<tr>
<td>Number of attacks requiring treatment at home</td>
<td>3.3 (6.6)</td>
<td>3.0 (5.7)</td>
</tr>
</tbody>
</table>

**Figure 2: Chronic Symptoms Between Attacks at Time of Enrollment**

- Impact of Disease on Daily Life at Time of Enrollment
  - At baseline, all patients who responded to the questions reported that they had limited social interactions (n=23 EU and n=30 US respondents) or were unable to leave home (n=18 EU and n=14 US respondents) due to disease related issues in the last 12 months
  - Overall, 36.5% of EU patients (23/63) and 61.2% of US patients (30/49) included in the study had limited social interactions and 28.6% of both EU (18/63) and US patients (14/49) were home-bound in the last 12 months (Figure 3)

**Figure 3: Disease-Related Social Limitations**

- On-Set Symptoms During Attacks
  - During attacks in this 12-month study, most patients who responded to the questions reported having pain symptoms, mood/sleep symptoms, GI symptoms, and other symptoms (Figure 4)
  - During attacks, EU and US patients commonly experienced pain symptoms (particularly in the abdomen, back, and arm/leg), nausea, tiredness, and trouble sleeping (Figure 5)
  - Aside from trouble sleeping, the incidences of these symptoms were higher among US patients than EU patients (Figure 5)

**Figure 4: On-Set Attack Symptoms**

- Overall, patients with AHP in the EU and US showed similar symptoms during attacks and experienced comparable chronic symptoms
  - Common symptoms during attacks included pain (particularly in the abdomen, back, or arm/leg), nausea, tiredness, and trouble sleeping
  - Many patients with AHP experienced negative impacts on daily life, specifically related to the disease, including limited social interactions
  - This study demonstrates that most patients with recurrent attacks of AHP in the EU and the US have chronic symptoms in addition to the significant burden associated with acute attacks

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- References