IS IT ACUTE HEPATIC PORPHYRIA (AHP)?

DETECT

Signs and symptoms of AHP* include:

SEVERE, DIFFUSE ABDOMINAL PAIN[1,2]

+

1 OR MORE ADDITIONAL SYMPTOMS[3-6]

AUTONOMIC Nervous System	CENTRAL Nervous System	PERIPHERAL Nervous System	CUTANEOUS†
• Nausea/ vomiting • Constipation • Tachycardia	• Seizures • Anxiety • Mental status changes	• Limb weakness or pain • Peripheral neuropathy	• Skin lesions on sun-exposed areas

>90%

of patients with AHP attacks report abdominal pain

(mimics an acute abdomen but without specific localization)[4,5,8]

*There are 4 AHP types. About 80% of cases are acute intermittent porphyria (AIP), followed by variegate porphyria (VP), hereditary coproporphyria (HCP), and the extremely rare ALA dehydratase–deficiency porphyria (ADP).[3,4,7]

†Cutaneous symptoms occur only in HCP and VP.[4,6]

SUSPECT

Nonspecific symptoms can lead to misdiagnoses[8-11]

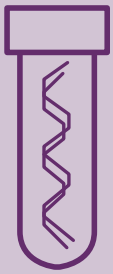
- ✕ Irritable bowel syndrome
- ✕ Acute abdomen
- ✕ Endometriosis
- ✕ Fibromyalgia
- ✕ Psychiatric disorders

- ✓ AHP

SELECT

Random (spot) urine can be used to diagnose AHP[6]

- ✓ PBG‡
- ✓ ALA‡
- ✓ Porphyrins§



- Genetic testing can confirm a biochemical diagnosis and identify the specific mutation that a patient has[4,6,‖]

‡PBG is highly specific to diagnosing AHP, while testing ALA is helpful for differential diagnosis and confirmation of ADP.[4]

§Urine porphyrins alone should not be used to diagnose AHP, as they can be elevated for several reasons.[4]

‖Penetrance in AHP is low, so people with a gene mutation for AHP may still be asymptomatic.[6]

ALA=aminolevulinic acid; PBG=porphobilinogen.

Alnylam® PHARMACEUTICALS

Acute Hepatic Porphyria (AHP)

Easy to Overlook But Easy to Test For

A family of rare and debilitating genetic diseases

AHP is characterized by acute, potentially life-threatening attacks and, for some patients, chronic, debilitating symptoms. Serious long-term complications associated with AHP include chronic kidney disease, liver cancer, and hypertension.[1,4,11,12]

The pathophysiology of AHP

AHP is caused by an enzyme deficiency in the heme biosynthesis pathway in the liver. Disease triggers can induce ALA synthase 1 (ALAS1), the key regulator in this pathway, leading to the accumulation of neurotoxins ALA and PBG, which are factors associated with AHP attacks and other disease manifestations.[4,6]

Because ALA and PBG are most likely to be elevated during symptomatic periods, the optimal time to test is during or shortly after an attack.[4]

Common symptoms

The cardinal symptom is severe, diffuse abdominal pain. Other common symptoms may include nausea and vomiting, discoloration or darkening of urine, confusion and anxiety, and limb pain or weakness.[4,5,8,12]

AHP most often occurs in women of childbearing age.[3] The major signs and symptoms are due to effects on the nervous system.[4]

Burden of delayed diagnosis

AHP is often misdiagnosed due to the nonspecific nature of symptoms, and patients may cycle from specialist to specialist.[8]

Delayed diagnosis or misdiagnosis of an AHP attack may lead to more severe attack symptoms and poorer patient outcomes, including hospitalizations and unnecessary surgeries.[2,4,11,13]

When the signs and symptoms make you suspect AHP, consider ordering these random (spot) urine tests[6]

- **PBG**[14] — CPT Code: 84110
- **ALA**[14] — CPT Code: 82135
- **Porphyrins**[14] — CPT Code: 84120

CPT=Current Procedural Terminology.

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