

Identifying and Diagnosing Acute Hepatic Porphyria



Full abbreviations, accreditation, and disclosure information available at PeerView.com/DQY40

Clinical Criteria to Establish an AHP Diagnosis¹⁻⁴

Initial Assessment

- · Personal and family history
- Physical examination
- Neurologic assessment (baseline)
- Baseline assessment (blood count, ferritin, hyponatremia, renal function, hepatic function)

Biochemical Testing

- First line: Urinary PBG, ALA, porphyrins, creatinine
 - Quantitative spot urine sample normalized to creatinine
 - Normal ALA: 1.47 mmol/mol Cr (9.3to 12-fold higher in AHP)
 - Normal PBG: 0.137 mmol/mol Cr (238- to 336-fold higher in AHP)
 - Should be performed when patients are sick, since levels may be normal between acute episodes
- Second line: More thorough porphyrin assessment

Genetic Testing

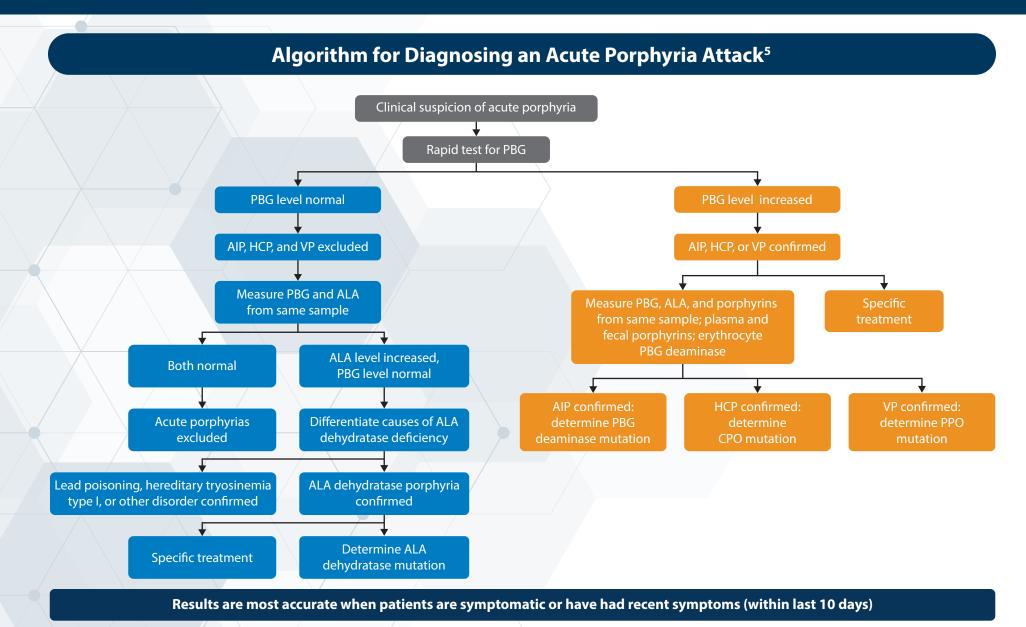
- After biochemical testing (not recommended for first-line testing)
- ALAD, HMBS, CPOX, and PPOX genes
- Helps confirm or exclude porphyria diagnosis (~95% sensitivity and 99% specificity)
- To determine specific AHP
- To help identify at-risk family members



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^{1.} Balwani M et al. Hepatology. 2017;66:1314;1322. 2. Anderson KE. Mol Genet Metab. 2019;128:219-227. 3. Agarwal S et al. JIMD Rep. 2020;57:85-93. 4. Kauppinen R. Expert Rev Mol Diagn. 2004;4:243-249.

^{5.} https://porphyriafoundation.org/for-healthcare-professionals/emergency-room-quidelines-for-acute-porphyrias/.



Preventive Measures for Acute Hepatic Porphyria Attacks



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Precipitating and Aggravating Factors That Can Trigger an Increase in ALA and PBG¹⁻⁴

- Luteal phase of menstrual cycle
- Pregnancy/postpartum
- Stress/exhaustion
- Fasting/dietary restriction
- Infection
- Smoking
- Alcohol —binge drinking
- Surgery/anesthesia

Implicated Medications

- Anticonvulsants (ie, phenytoin, barbiturates, valproic acid, carbamazepine, primidone)
- Hormones (eg, estrogen, progestogens)
- Some antibiotics/antifungals (eg, trimethoprim, erythromycin, fluconazole, nitrofurantoin, rifampicin)
- Inducers of cytochromes P-450



Preventive Measures for Acute Hepatic Porphyria Attacks



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Harmful and Safe Drugs for Patients With AHP⁵

Harmful Drugs

Barbiturates

Trimethoprim

Many tranquilizers and sedatives (eg, meprobamate, methyprylon, glutethimide)

Griseofulvin

Some antiepilepsy drugs (phenytoin, etc)

Birth control pills

Alcohol

Ergots

Metoclopramide

Rifampin

Diclofenac

Danazol

Safe Drugs

Narcotic analgesics (morphine, meperidine, codeine, etc)

Aspirin and acetaminophen

Phenothiazines (eg, chlorpromazine)

Penicillin and derivatives

Chloral hydrate

Streptomycin

Glucocorticoids

Bromides

Insulin

Atropine

Cimetidine

Serotonin reuptake inhibitors (antidepressants)

All drug lists are mainly based on expert opinion, not evidence-based, so there is an ongoing need for the testing of drugs and chemicals

^{1.} Balwani M et al. Hepatology. 2017;66:1314-1322. 2. Anderson KE. Mol Genet Metab. 2019;128:219-227. 3. Bissell DM et al. N Engl J Med. 2017;377:862-872.

^{4.} https://porphyriafoundation.org/for-healthcare-professionals/drug-safety/. 5. www.porphyriafoundation.org.