HYPERAMMONEMIA

When to Suspect a Late-Onset Urea Cycle Disorder (UCD)

Patients with late-onset UCDs may function relatively normally for decades until stressors such as catabolic events, protein overload, or certain drugs trigger a hyperammonemic crisis.[1,2] Nonspecific symptoms and non-related illnesses experienced by the patient can make it difficult to recognize a late-onset UCD.[1,2]

A detailed patient/family history and physical examination are essential to identifying patients with a suspected late-onset UCD.[1,3] If presentation suggests hyperammonemia, check ammonia levels and consider consultation with a metabolic geneticist without delay.[1]

Key investigative questions to consider:

- **Is there a family history of metabolic disease, neurological or psychiatric disorders, infant mortality, or consanguinity?[1,2]**

- **Does the patient's standard diet, recent food intake, or weight changes increase suspicion?**

  Symptoms:
  - Poorly documented food allergies or intolerances, atypical colic, recurrent vomiting, and/or difficult-to-control gastroesophageal reflux[3]
  - Autoselective vegetarianism (i.e., elective decreased protein intake) or a high carbohydrate intake[1]

  Triggers:
  - Consumption of a high-protein meal (e.g., a barbecue), diet, or supplements[2,4,5]
  - Rapid weight loss (e.g., caused by malabsorption and nutritional disruption following bariatric surgery or extreme mental stress)[1,5]

- **Does the patient exhibit uncharacteristic behavior or have a history of behavioral or psychiatric illness?[1]**

  Example: Confusion or combative or psychotic behavior post-partum[6,7]

- **Does the patient have a history of prolonged clinical courses with seemingly routine illnesses?[1]**

  Example: Past episodes of flu-like illnesses that resulted in prolonged illness[1]

- **Are the patient's nonspecific symptoms unexplained by other differentials?**

  Example: Intoxication suspected,[2] but toxicology screen results are normal

- **Is the patient non-responsive to specific treatment?**

  Example: Viral illness suspected to be exacerbating asthma, but response to IV steroids and asthma-specific drugs is negative[1]

References

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