



Brief summaries of the latest clinical findings

## **SURGERY COMPLICATIONS**

### **Porphyria after Bariatric Surgery**

Acute weight loss—like that associated with bariatric surgery—can precipitate porphyria, a dangerous metabolic disorder, warn doctors from Hôpitaux Universitaires de Strasbourg in Strasbourg, France. They report on a patient who showed alarming neurologic symptoms and pain after bariatric surgery.

The 32-year-old woman was admitted to the intensive care unit (ICU) with acute respiratory failure. Months earlier, she had undergone a noncomplicated sleeve gastrectomy (her body mass index [BMI] was 47 kg/m<sup>2</sup>). One month after the surgery, through which she had lost 44 lb, she began to have constant and diffuse abdominal pain, with slightly increased plasma concentration of lipase. Her doctors gave her a diagnosis of pancreatitis.

Over the next months, she suffered recurrent bouts of vomiting, along

with abdominal and leg pains. Three weeks before she was admitted to the ICU, the leg pains intensified, and she developed tetraparesis.

On admission, 6 months after surgery, her BMI was 21 kg/m<sup>2</sup>. Her heart rate was 135 beats/min. She not only had tetraparesis, but also diffuse allodynia and paresthesias, facial diplegia, and swallowing disorders with alveolar hypoventilation requiring mechanical ventilation. Treatment included immunoglobulins against possible Guillain-Barre syndrome.

Although there was no sign of photosensible pigmenturia, her history of abdominal pain and neurologic disorders prompted a urine examination, which revealed porphobilinogen more than 100 times the upper normal range and 5-aminolevulinic acid. She was infused with heme arginate and given a carbohydrate-rich diet, and the values returned to normal. On the basis of the urine, fecal, and plasma porphyrin concentrations, she was diagnosed with hereditary coproporphyrin.

While the porphobilinogen and 5-aminolevulinic acid rapidly declined, by 3 weeks her motor skills had only slightly improved. Her significant neuropathic pain mandated a prolonged ICU stay. Her doctors say full neurologic recovery is not expected for months.

Acute hepatic porphyria has been reported once after gastric bypass, but in this case the acute attack followed sleeve gastrectomy. The authors note that weight loss from bariatric surgery impairs liver energy metabolism and causes chronic carbohydrate deficiency, which leads to an upregulation of the hepatic enzyme 5-aminolevulinic acid synthetase 1 for heme synthesis.

Compared with other types of bariatric surgery, they add, sleeve gastrectomy is irreversible. Ironically, to recover, their patient will have to actually gain back weight. ●

Source: Danion F, Guillot M, Castelain V, Puy H, Deybach J-C, Schneider F. *Am J Med.* 2012;125(11):e1-e2.  
doi: 10.1016/j.amjmed.2012.01.028.