

**OP10 ATYPICAL PRESENTATION
OF THYROID STORM
PRESENTING AS ACUTE LIVER
FAILURE: A CHALLENGING
DIAGNOSIS IN EMERGENCY
DEPARTMENT**

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Thyroid storm is a life-threatening state of endocrine emergencies. The diagnosis is difficult, especially in atypical cases. We presented a case of acute liver failure (ALF) that turned out to be in thyroid storm.

A 22-year-old lady presented with a 2-day history of fever, abdominal pain, vomiting, and palpitation. She had unintended weight loss recently. She used to vape, and smoke weed for the past 1 year. She also took traditional medication for one month. On examination, she was drowsy with a Glasgow Coma Scale of 14, diaphoretic, good pulse volume, and warm peripheries. Her vitals were as follows: blood pressure 95/46 mmHg, pulse rate of 170 beats/ minute, respiratory rate of 22 breaths/ minute, saturation 98% on air, and temperature of 38°C. No jaundice, proptosis, exophthalmos, or neck swelling. Abdominal examination revealed tenderness at the right upper quadrant. Electrocardiography showed sinus tachycardia. Urine pregnancy test and standard toxicology panels were negative. Liver function test (LFT) revealed marked derangement: alkaline phosphatase 82 U/L, aspartate aminotransferase 9501 U/L, alanine aminotransferase 2621 U/L, total bilirubin 42.6 umol/L. International normalized ratio prolonged. She was diagnosed to have an acute liver injury and was given intravenous N-Acetylcysteine as per protocol. Ultrasound hepatobiliary

system showed normal findings. In the ward, her thyroid function test (TFT) revealed hyperthyroidism. Thyrotropin receptor antibody and thyroglobulin antibody were positive which is suggestive of Grave's disease.

The diagnosis of thyroid storm is difficult since it can mimic sepsis or gastrointestinal infection, especially in undiagnosed thyrotoxic patients. Our patient had an acute liver failure which initially we think could be drug-induced. However, the urine toxicology panel was negative.

Retrospectively, Burch-Wartofsky Point Scale score of 65 points, suggestive of thyroid storm, which was later confirmed by TFT. Medical management had successfully down-trending of LFTs.

ALF rarely presented as thyroid storm in undiagnosed thyrotoxic patients. Therefore, thyrotoxicosis should be one of the differential diagnoses for ALF causes. ALF in the thyroid storm setting has a high mortality rate, therefore, early diagnosis and treatment can prevent ALF deterioration and the need for a liver transplant.

Keyword: Thyroid storm, liver failure