

A case of thyrotoxicosis with a stormy clinical course*Nayak UA, Siddique H, Baskar V, Buch HN.**New Cross hospital, Wolverhampton, West Midlands*

Thyrotoxicosis is a relatively common endocrine condition with a largely benign clinical course. Thyroid storm is a rare but life threatening augmentation of manifestation of thyrotoxicosis with a mortality of 30-60%. Early recognition and aggressive treatment of thyroid storm is essential. We describe a patient with long standing and poorly controlled thyrotoxicosis who presented acutely with thyroid storm requiring intensive care support. We discuss the precipitants, presenting features and role of various agents in the management of this potentially fatal condition.

Case report

A 23 year-old lady was admitted with a short history of prolonged vomiting, diarrhoea, worsening palpitations, sweats and exhaustion. She had a past history of Graves' thyrotoxicosis for 6 years that was sup-optimally treated with suggestion of poor compliance contributing to this. She admitted not taking any medications for 2 weeks leading up to this admission.

On admission, she was tremulous, pyrexial, in atrial fibrillation with a fast ventricular rate, tachypnoeic and hypoxic but without evidence of heart failure. She had a tender right hypochondrium without a palpable liver. A smooth moderate sized goitre was palpable without any bruit over it. She had exophthalmos but no chemosis.

Initial investigations revealed grossly deranged liver biochemistry, coagulation failure and thrombocytopenia (see table). Her thyroid function tests confirmed severe hyperthyroidism (TSH <0.01(0.27-4.2 mU/L), fT4>100pmol/L (9-22pmol/L)).

The diagnosis was acute thyroid storm with liver failure. She was managed in the intensive care unit with beta blocker, Propylthiouracil (PTU), Lugols' iodine, IV Hydrocortisone and IV fluid resuscitation. The clinical course was one of gradual recovery both clinically and biochemically (see table) and since discharge, she continues to remain euthyroid on maintenance therapy with PTU. As a definitive treatment option she has preferred to go ahead with thyroidectomy in the near future.

	Day 0	Day 1	Day 7	Day 24
Bilirubin (2-17µmol/l)	47	68	26	12
ALP (38-126 IU/l)	215	186	152	165
ALT (5-40 IU/l)	85	363	145	22
Albumin (36-52g/l)	33	29	28	37
INR	1.7	2.1	1.4	1.0
Platelet count (150-450)	111	95	63	178
TSH (0.27- 4.2 mU/l)	0.01		0.01	0.01
FT4 (12- 22 pmol/l)	>100		14.1	4.0
FT3			3.7	5.9