

# GRAVES' DISEASE ASSOCIATED WITH SEVERE HYPOALBUMINEMIA

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## Introduction

The most common cause of thyrotoxicosis is Graves' disease. Thyroid storm is a life-threatening condition with aggravation of hyperthyroidism that may cause decompensation of organ systems. Thyroid storm mostly presents with fever, tachycardia, arrhythmia, jaundice, congestive heart failure and consciousness. The biochemical parameters such as glucose, lipid and protein abnormalities can occur due to the acceleration of basal metabolism. We report a rare case of severe hypoalbuminemia with thyroid storm. To our knowledge it is the first case of severe hypoalbuminemia due to thyrotoxicosis in literature.

## Case

41 years old female had been followed up with the diagnosis of Graves disease for 14 years. but didn't have a regular control and no drug use in the last one year. She was admitted with palpitations, shortness of breath, mild abdominal pain, nausea and complaints of discomfort. On examination, She had a temperature of 38.3 °C, arterial blood pressure 178/88mmHg, irregular heart rate of 140beats/min, respiratory rate of 22breaths/min, mild pretibial edema and was seen nervous. Blood analysis revealed TSH of 0.005 IU / ml (0.2 to 4.4), FT3 of 10.9 pg / ml (2 to 4.4), FT4 of 3.5 pg / ml (0.9 to 1.7) , A-TPO of 600 IU / ml, A-TG of 4000 IU / ml.) The other routine examinations revealed postprandial blood glucose 158 mg / dl, ALT: 16 U / L, AST: 23 U / L, total-protein: 4.7 g / dl, albumin: 1.8 g / dl, urea: 49 mg / dl, creatinine: 0.6mg/dl. The patient was hospitalized with the diagnosis of thyrotoxic crisis due to thyroid storm scoring system (patient scoring: 60, normal interval: < 25) . She was treated with large doses of propylthiouracil, propranolol, Lugol's solution and dexamethasone. On the fourth day of treatment , TSH of 0.005 IU / ml, fT3 of 2,97 pg / ml, fT4 of 1.98 pg / ml. Total thyroidectomy was performed. 24-hour urine analysis was free of proteinuria. Acute-phase reactant levels were normal. Anti-endomysium and antigliadin antibodies were negative. Upper gastrointestinal endoscopy revealed normal mucosal findings. L-thyroxine treatment was started after surgery. In the follow-up, total protein and albumin levels returned to normal limits.

**Conclusion**

Severe hypoalbuminemia, that can be seen in many serious diseases, may be encountered in the long term progress of thyrotoxicosis unexpectedly. Hypoalbuminemia should be evaluated during thyrotoxicosis.