

Category : **Endocrine disease**

**A115 - Clinical manifestation and diagnosis of patients with thyroid storm: a retrospective study**

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**Introduction:**

Thyroid storm (TS) is an endocrine emergency, which is a rare and life-threatening condition. It occurs suddenly leading to a high mortality rate if not recognized immediately and treated aggressively. However, due to its rare incidence, there is a lack of information about the manifestations of TS. The present study aimed to evaluate important aspects of epidemiology, diagnosis, and prognosis of TS.

**Methods:**

We conducted a retrospective observational study on patients diagnosed with thyroid storms in our hospital between January 2011 and December 2020. The definition of TS was used by the Japanese Thyroid Association criteria [1]. We obtained information on the patients' clinical characteristics and outcome from medical records.

**Results:**

Six patients were included in this study. The median and the interquartile range (IQR) of age were 45 [41–52] years old. The SOFA score on ICU admission was 3.5 [3.0–4.8] and the Burch-Wartofsky Point Scale was 65 [60–81]. The thyroid function test revealed free triiodothyronine (fT3) level of 13.58 [9.78–20.00] pg/mL (normal range: 2.3–4.0), free thyroxine (fT4) level of 6.00 [4.41–6.53] ng/dL (normal range: 0.9–1.7), and thyroid-stimulating hormone (TSH) < 0.003  $\mu$ IU/mL (normal range: 0.5–5.0). All patients exhibited abnormal tachycardia and altered mentation. The symptoms of the patients mostly included fever, nausea, and vomiting. The most common cause (83.3%) of the TS was self-interruption of the anti-thyroid drug which is used to treat hyperthyroidism. One case exhibited diabetic ketoacidosis with TS. The 28-day mortality of all patients was found to be 33.3%.

**Conclusion:**

TS needs an early diagnosis and an aggressive treatment with the appearance of its symptoms to prevent worsening of the condition. Additionally, efforts should be made to maximize patient compliance to anti-thyroid agents used for the treatment of such patients.

**References:**

1. Akamizu T. *Thyroid* 28:32–40, 2018