

## **THYROID STATUS AND WEANING OUTCOME IN CHRONIC RESPIRATORY FAILURE**

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### **BACKGROUND/AIM:**

While thyroid disorders are common in the older populations and may sometimes cause respiratory failure, euthyroid sick syndrome (ESS) or subclinical thyroid dysfunction is responsible for most of the thyroid hormone derangements seen in the critically-ill patients. The objective was to prospectively evaluate the effect of thyroid status on weaning outcome, in adults with chronic respiratory failure.

**METHODS:** One hundred thirty patients with chronic respiratory failure >21 days were enrolled. Serum thyroid stimulating hormone (TSH) level was checked at entry, and if abnormal, followed by serum FT4 measurement. Patients were classified into euthyroid, subclinical hypothyroidism, subclinical hyperthyroidism, primary hypothyroidism and hyperthyroidism. The weaning outcome and duration of mechanical ventilation were compared.

**RESULTS:** 58 patients (44.6%) were successfully liberated from mechanical ventilation, including 3 out of 4 primary hypothyroidism patients and 1 out of 2 hyperthyroidism patients. 62 out of 72 patients failed to wean eventually expired; ten patients remained ventilator-dependent until the writing of this manuscript. 124 patients were diagnosed as euthyroid, 17 with subclinical hypothyroidism, and 16 with subclinical hyperthyroidism. There was no significant difference in mortality and duration of mechanical ventilation between patients with euthyroid and subclinical thyroid dysfunctions. (I just used Hindu-Arabic notation for all the numbers for uniformity, but I'm not sure if its ideal to do so in beginning sentences. Please check.)

**DISCUSSION/CONCLUSION:** The incidence of thyroid dysfunction is not increased and the thyroid status does not influence weaning outcome in adults with chronic respiratory failure. However, given the clinical and financial implication of ventilator-dependence, we recommend all patients be screened for this potentially treatable cause of respiratory failure.

**Key words:** Chronic respiratory failure, Thyroid status, Weaning