

## Thyroid Dysfunction in Elderly Patients

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### Abstract

**Introduction:** The aim of this study was to determine the prevalence of thyroid dysfunction in an elderly in-patient population in a restructured hospital. **Methods:** This was a prospective observational study performed on consecutive patients admitted into a geriatric ward in a restructured hospital in Singapore over a period of 3 months. Thyroid function tests (free thyroxine and thyroid stimulating hormone) were performed on all patients during routine blood screening. For those with abnormal thyroid function tests, further investigations including thyroid autoantibodies and anterior pituitary hormone measurements were performed where indicated. Demographic data, the presence of sepsis, hypoalbuminaemia and patients' functional status as well as other thyroid-related data were captured. **Results:** A total of 184 patients were screened and 62 (33.7%) patients were found to have abnormal thyroid function tests. The mean age was 83.8 years (SD 6.2). Twenty (32.3%) were males and 42 (67.7%) were females. Thirty-three (53.2%) patients had sepsis on admission, 29 (46.8%) were functionally dependent and 22 (35.5%) had hypoalbuminaemia. The prevalence of thyroid disorders were as follows: 1 (0.5%), 4 (2.2%), 9 (4.9%), 15 (8.2%) and 33 (17.9%) patients had hyperthyroidism, subclinical hypothyroidism, primary hypothyroidism, secondary hypothyroidism and sick euthyroid syndrome, respectively. Cross-tabulating sick euthyroid syndrome against functional dependence, hypoalbuminaemia and sepsis did not reveal any significant association (Fisher's exact test,  $P = 0.44$ ,  $P = 0.42$  and  $P = 0.61$ , respectively). **Conclusion:** There was a high prevalence of thyroid dysfunction in the elderly in-patient population. We would advocate a lower threshold for screening elderly in-patients for thyroid dysfunction.

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**Key words:** Secondary hypothyroidism, Sepsis, Sick euthyroid, Thyroid antibodies

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