Natural History and Comorbidities of Subjects with Subclinical Hyperthyroidism: Analysis at a Tertiary Hospital Setting

Shaikh Abdul Kader Kamaldeen Abdul Shakoor, 1MBBS, MD, MRCP (UK), Robert Hawkins, 2MBChB, MD, FRCP A, Shin Yii Kua, 2MBBS, Min Er Ching, 1MBBS, Rinkoo Dalan, 1MBBS, FAMS (Endocrinology), FRCP (Edinburgh)

Abstract

Introduction: Subclinical hyperthyroidism (SH, grade 1, thyrotropin (TSH) ≥0.1 mU/L and grade 2, TSH <0.1 mU/L) is a common disorder with increased prevalence in older subjects. There is evidence for increased morbidities in SH, such as atrial fibrillation and osteoporosis. We aim to study the natural history and comorbidities of SH from patients referred to a tertiary endocrine clinic in Singapore as they are currently unknown. Materials and Methods: Retrospective evaluation of SH subjects for natural progression and comorbidities. Results: One hundred and thirteen SH subjects (male/female: 24/89, mean age: 67.2 years, grade 1/grade 2: 60/53) were identified from the endocrine clinic. The aetiology of SH include 52 multinodular goitre, 15 Graves’ disease, 7 toxic adenoma and 39 unclassified. A minority of SH patients (5.3 %) progressed to overt hyperthyroidism while 13% remitted to euthyroid state (1 to 3 years with a mean follow-up of 18 months) in the total cohort. Most of the patients remained in SH state during follow-up (50/60 in grade 1 SH and 42/53 in grade SH). However, no single predictive factor could be identified for progression or remission of SH. The prevalence of morbidities in SH subjects include ischaemic heart disease (16.8%), heart failure (8.9%), tachyarrhythmias (13.3%), any cardiovascular disease (28%), cerebrovascular disease (28%), osteoporosis (28%), and any fracture (15.9%). Conclusion: Most of SH cases in our cohort remain in subclinical state with very few progressing to overt hyperthyroidism. Significant proportion of SH subjects have vascular disease, but this association needs to be confirmed in prospective controlled studies.

Key words: Cardiovascular risk, Progression, Remission

1Department of Endocrinology, Tan Tock Seng Hospital, Singapore
2Department of Laboratory Medicine, Tan Tock Seng Hospital, Singapore
Address for Correspondence: Dr SK Abdul Shakoor, Department of Endocrinology, Tan Tock Seng Hospital, 11 Jalan Tan Tock Seng, Singapore 308433.
Email: shaikh_shakoor@ttsh.com.sg

Ann Acad Med Singapore 2014;43:506-10