



Thyroid Dysfunction in Patients with Type 2 Diabetes: A Longitudinal Study

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Thyroid Dysfunction in Patients with Type 2 Diabetes: A Longitudinal Study Cross-sectional studies have r Cross-sectional studies have reported that the risk of thyroid dysfunction in patients with type 2 diabetes is twofold higher than the non-diabetic subjects. However, a guideline for screening for thyroid dysfunction in type 2 diabetes is lacking. This study was conducted to determine the natural history and incidence of thyroid dysfunction in patients with type 2 diabetes. Medical records of 140 patients with type 2 diabetes who had attended a hospital-based clinic were reviewed. Thyroid stimulating hormone (TSH) and serum free thyroxine (T4) were measured at baseline and at annual review. Antibodies to thyroperoxidase (TPOAb) were documented. Mean age was 48.7 years, and 67.1% were females. Three patients (2.1%) were known to have thyroid disease, and nineteen patients (13.6%) were identified to have thyroid dysfunction at baseline screening. Thyroid dysfunction was significantly associated with positive TPOAb ($p<0.0001$) and female gender ($p<0.05$). Among the 118 patients with normal thyroid function tests at baseline, ten patients were lost to follow up. A total of 108 patients were periodically re-examined during 5.5 years of mean follow-up. Eight patients (7.4%) had incident thyroid dysfunction. One patient developed clinical hypothyroidism, one patient developed clinical hyperthyroidism and six patients developed subclinical hypothyroidism. Mean age was 38.3 years at diagnosis for type 2 diabetes and 55.9 years for thyroid dysfunction. Mean time between baseline and onset of thyroid dysfunction was 3.8 years. Thyroid dysfunction occurred more frequently in female (9.0%) than in male (4.9%) patients and in TPOAb+ patients (25.0%) than in TPOAb- patients (6.2%), but both were not statistically significant. TSH[gt]2.2 mU/l was the significant risk factor for incident thyroid dysfunction ($p<0.0001$). In conclusion, this study suggests that patients with type 2 diabetes should have assessment of thyroid function and TPO antibodies at baseline. Annual re-examination should be limited to those with baseline TSH[gt]2.2 mU/l and/or positive TPO antibodies. Patients with baseline TSH[underline][lt]2.2 mU/l should be re-examined less frequently (every 3 years), or if the patient develops symptoms of thyroid dysfunction. AFAF M. S. AL-ADSANI 2507-PO Kuwait, Kuwait Epidemiology

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