

Prevalence of thyroid dysfunction in type 2 diabetes mellitus patients from south-coastal Andhra Pradesh

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OBJECTIVES

To study the prevalence of thyroid disorders and their association with glycaemic parameters and microvascular complications among adult T2DM patients from south-coastal region of Andhra Pradesh, India

METHODS

This cross-sectional study was conducted in the Department of Endocrinology, Narayana Medical College and Hospital, Nellore, between October 2013 and September 2015. Pregnant and lactating women, patients on drugs interfering with thyroid function known patients with thyroid disorders or acute illness were excluded from the study.

RESULTS

A total of 500 T2DM subjects were included in the study. Thyroid disorders were observed in 98 (19.6%) subjects. Subclinical hypothyroidism (n=66, 13.2%) was the most common thyroid disorder whereas overt hypothyroidism (n=24, 4.8%) and thyrotoxicosis (n=8, 1.6%) were less common. None of the thyroid disorders were associated with age, gender, glycemic control or diabetes duration. Subclinical hypothyroidism was more frequent in obese patients (16.2% vs 7.6%, p=0.007) whereas overt hypothyroidism (45.8% vs 2.9%, p< 0.0001) was more frequent among patients with family history of thyroid disease. Subclinical hypothyroidism (9.6% vs 18.7%, p=0.0044) was less frequent among metformin users. Diabetic neuropathy was the most common microvascular complication but did not differ between the groups. Diabetic retinopathy (27.3% vs 8.9%, p < 0.001) was significantly more frequent whereas diabetic nephropathy (22.7% vs 13.9%, p=0.06) tended to be more frequent among patients with subclinical hypothyroidism than euthyroid T2DM patients.

CONCLUSION

We report high prevalence of thyroid disorders among T2DM patients from south-coastal region of Andhra Pradesh. Subclinical hypothyroidism was the most common thyroid dysfunction, was more frequent among obese and nonmetformin users and was associated with more frequent occurrence of diabetic retinopathy.