ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 9, Issue, 06, pp.51943-51944, June, 2017

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

THYROID DYSFUNCTION RISING TREND IN ADULT ONSET DIABETES MELLITUS

[1]Varu, [*,2]Ashwani Sharma, [3]Md Arif Naseer and [2]Das, S. C.

[1]Department of Microbiology, School of Basic Applied Sciences, Shobhit University, Gangoh, Saharanpur (India)
[2]Mulayam Singh Yadav Medical College & Hospital, 21-KM, NH-235, Meerut-Hapur Road, Meerut (India)
[3]Department of Pharmaceutical Chemistry, A.V. Institute of Pharmaceutical Science, Shobhit University, Gangoh, Saharanpur (India)

ARTICLE INFO

Article History:
Received 23rd March, 2017
Received in revised form
20th April, 2017
Accepted 16th May, 2017
Published online 20th June, 2017

Key words:

Type 2 diabetes mellitus (type 2 DM).

ABSTRACT

Type 2 diabetes (maturity onset diabetes) occurring in and around the age of 40 is also showing a rising trend in thyroid dysfunction. Present work in Saharanpur (U.P.) India was carried out to know the relationship if any between the two disorders. Thyroid function in normal groups and type 2 diabetic patients were carried out. Biochemical parameters such as – fasting plasma glucose TSH (Thyroid stimulating hormone), T_3 (Triidothyronine), T_4 (Thyroxin) were measured in different groups for assessment. The study showed the subclinical cases of hypothyroidism are at risk for type 2 diabetes.

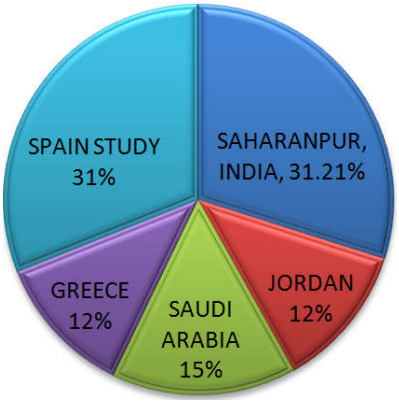
Citation: Varu, Ashwani Sharma, Md Arif Naseer and Das, S. C. 2017. "Thyroid dysfunction rising trend in adult onset diabetes mellitus", *International Journal of Current Research*, 9, (06), 51943-51944.

INTRODUCTION

Recent studies in Saharanpur (India) and other places show a predilection of thyroid functional abnormality in type 2 diabetes mellitus. Thyroid hormone estimation in diabetes mellitus (DM) type 2 is required for identification and management of such coexistence. Hypothyroidism, both overt (11.4%) and subclinical hypothyroidism (16.3%), was more common as compared with hyperthyroidism. Though such high prevalence rates (30-32%) of thyroid dysfunctions in patient of type 2 diabetes have been reported by other Indian (Vikhe *et al*., 2013) and some international studies (Diez *et al*., 2011) the majority have shown theses rates to be 13-16%, respectively. (Radaideh *et al*., 2004; Akbar *et al*., 2006) Thyroid dysfunctions are more common in females having type 2 diabetes, those diabetics with family history of thyroid dysfunction and also in older patients with long duration of diabetes. (AI-Geffari *et al*., 2013) Since, the occurrence of thyroid dysfunction is more common in patients with diabetes as compared to the prevalence in general population, it is recommended that all the cases of type 2 diabetes should be screened for thyroid dysfunctions and preferably annually. (American Diabetes Association, 2013; Perros *et al*., 1995) This study showed a high prevalence of thyroid dysfunction in type 2 DM (31.21%) in comparison with other studies done in other parts of the world except in one study done in Spain (Diez *et al*., 2011) who found an overall prevalence of thyroid dysfunction in 32.4% of type 2 diabetics patients. A study in Jordan (Radaideh and Ajlouni, 2004) found the overall prevalence of thyroid disease in type 2 DM to be 12.5% and 6.6% in the control group and the most common is subclinical hypothyroidism. In another study in Saudi Aribia (Akbar *et al*., 2006) the association between thyroid dysfunction, thyroid autoimmunity and type 2 DM was investigated and found that thyroid autoimmunity in diabetics was 10% and in the control it was 5% while thyroid dysfunction was found in 16% diabetics and 7% control. In a study done in Greece the prevalence of thyroid dysfunction in type 2 DM was found to be 12.3% with a higher prevalence in females (Papazafiropoulou *et al*., 2010).

The reason for high prevalence observed in our study is unknown as it is beyond the scope of this study. In conclusion, based on our finding we can say that the prevalence of thyroid disorder is quite high in type 2 DM and most of them have subclinical hypothyroidism, and most of these patients were above 45 of age. Prevalence in females patient and patients with BMI higher than 25 were at increased risk. It correlates to the study in Greece where they found a higher prevalence in females (Papazafiropoulou *et al*., 2010). Possible influence of female hormones in addition of diabetes in thyroid dysfunction cannot be denied and requires further work.

Corresponding author: **Ashwani Sharma,**
Mulayam Singh Yadav Medical College & Hospital, 21-KM, NH-235, Meerut-Hapur Road, Meerut (India)



Diagrammatic representation of different studies

The author kindly acknowledges Mulayam Singh Yadav Medical College & Hospital, Meerut (India) as well as department of Microbiology & department of Pharmaceutical Chemistry of Shobhit University, Gangoh – Saharanpur (India) for providing resources for the study. This was done at the department of Microbiology of Shobhit University, Saharanpur (India).

REFERENCES

AI-Geffari M, Ahmad NA, AI-Sharqawi AH, Youssef AM, Alnaqeb D, AI-Rubeaan K. 2013. Risk factors for thyroid dysfunction among type 2 diabetic patient in a highly diabetes mellitus prevalent society. *Int J Endocrinol*., 417920.

Akbar DH, Ahmed MM, AI-Mughales J. 2006. Thyroid dysfunction and thyroid autoimmunity in Saudi type 2 diabetics. *ActaDiabetol*., 43:14-8.

American Diabets Association. Standards of medical care in diabetes – 2013. Diabetes Care 2013;36:S11-66.

Diez JJ, Sanchez P, Iglesias P. 2011. Prevalence of thyroid dysfunction in patients with type 2 diabetes. *ExpClinEndocrinol Diabetes.,* 119:201-7.

Papazafiropoulou A, Sotiropoulos A, Kokolaki A, Kardara M, Stamataki P, Pappas S. 2010. Prevalence of thyroid dysfunction among greek type 2 diabetic patients attending an outpatient clinic. *J Clin Med Res.,* 1:75-78.

Perros P, McCrimmon RJ, Shaw G, Frier BM. 1995. Frequency of thyroid dysfunction in diabetic patients: Vale of annual screening. *Diabet Med*., 12:622-7.

Radaideh AR, Nusier MK, Amari FL., Bateiha AE, EI-Khateeb MS, Naser AS. 2004. Thyroid dysfunction in patients with type 2 diabetes mellitus in Jordan. *Saudi Med J*., 25:1046-50.

Radaideh AR. and Ajlouni KM. 2004. Thyroid dysfunction in patient with type 2 diabetes mellitus in Jordan. National Center of Diabetes, Endocrinology and Genetics, Jordan University of Science and Technology, School of Medicine, Irbid, Jondan. *Saudi Medical Journal,* 25(8): 1046-1050.

Vikhe VB, Kanithar SA, Tamakuwala KK, Gaikwad AN, Kalyan M, Agarwal RR. 2013. Thyroid dysfunction in patients with Type 2 diabetes mellitus at tertiary care centre. *Natl J Med Res*., 3:377-80.

****