Journal of Clinical and Scientific Research

Vol.2 Suppl 1 **April-June 2013** **ISSN(print) 2277-5706**
ISSN(online) 2277-8357

3rd Annual Conference of AP state Chapter of RSSDI (AP RSSDI - 2013)

Abstracts of the free paper session (AP RSSDI 2013)

Prevalence of islet cell specific autoantibodies in type 1 diabetes mellitus

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ABSTRACT

Introduction: There is a paucity of Indian data on prevalence of autoantibodies in patients with type 1 diabetes mellitus (T1DM).

Objective: To study the prevalence of GAD65 and IA-2 autoantibodies in patients with Type 1 Diabetes Mellitus.

Materials and methods: Cases (N=104) were patients with the age of onset below 35 years, with ketonuria / ketoacidosis and requiring insulin for management. Controls (N=67) were non diabetic and euthyroid subjects. A detailed clinical examination was performed especially for evidence of neuropathy, retinopathy, and nephropathy. ELISA was used for the estimation of GAD65 and IA-2 autoantibodies.

Results: GAD65Ab was positive in 53 (51%) patients. IA-2Ab was positive in 6 (5.7%) patients). Mean age of onset was not different between autoantibody positive and negative group (P = 0.278). Autoantibody positivity did not differ between groups with age of onset below 18 years and above 18 years (P=0.820). Mean duration of diabetes also did not differ between antibody positive and negative group (P = 0.884). Autoantibody positivity also did not differ between males and females (P = 0.115).

None of the controls were positive for either GAD65Ab or IA2Ab.

Conclusion: We found a low prevalence of autoantibodies in unselected cases with type 1 diabetes mellitus in a population representative of South India. Antibodies to GAD65 were more prevalent than antibodies to IA-2, in both children and adults. Prevalence of antibodies to GAD65 did not show any difference with the age of onset or with the duration of diabetes mellitus.

Rajitha D, Sunil E, Sachan A, Suresh V, Bitla AR, Satishkumar P. Prevalence of islet cell specific autoantibodies in type 1 diabetes mellitus.JClinSci Res 2013;2(Suppl 1):S4.