

# **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)

## **Editor's Message**

**vi**

## **Scientific Programme**

**vii**

## **Abstracts**

<b>Waist height ratio as a measure of insulin resistance in obese and overweight adolescents</b>	<b>S1</b>
<i>Nagesh V, Rakesh Kumar S, Neelaveni K, Vishnuvardhanrao M, Jiwani S, Habib S, Mohan H</i>	
<b>Growth, pubertal development and skeletal maturation in children with type 1 diabetes mellitus</b>	<b>S2</b>
<i>Sunil E, Rajita D, Arun M, Sailaja P, Sreenivas Ch, Sangeetha S, Rajagopal G, Satish P, Suresh V, Sachan A</i>	
<b>Bone mineral density assessment in type 1 diabetes mellitus</b>	<b>S3</b>
<i>Sunil E, Rajita D, Arun M, Sailaja P, Sreenivas CH, Sangeetha S, Rajagopal G, Satish P, Suresh V, Sachan A</i>	
<b>Prevalence of islet cell specific autoantibodies in type 1 diabetes mellitus</b>	<b>S4</b>
<i>Rajitha D, Sunil E, Sachan A, Suresh V, Bitla AR, Satishkumar P</i>	
<b>Prevalance of gestational diabetes in rural Andhra Pradesh</b>	<b>S5</b>
<i>Raghuramulu P, Uma, Kavitha, Laxmi Rajyam, Srinivas, Sandeep Raman P</i>	
<b>A study on prevalence of abnormal glucose tolerance and insulin resistance in obese children and adolescents</b>	<b>S6</b>
<i>Prasad NR, Reddy PA, Karthik TS, Chakravarthy PM, Faizal AN, Radha Rani P, Rushikesh R</i>	
<b>Presidential oration</b>	<b>S7</b>
<b>Diabetes - osteoporosis</b>	
<i>SudhakarRao N</i>	

## Abstracts of the free paper session (AP RSSDI 2013)

### **A study on Prevalence of Abnormal Glucose Tolerance and Insulin Resistance in Obese Children and Adolescents**

**N. Rajendra Prasad,<sup>1</sup> P. Amareesh Reddy,<sup>2</sup> T.S. Karthik,<sup>1</sup> P. Mithun Chakravarthy,<sup>1</sup>  
N. Faizal Ahamed,<sup>1</sup> P. Radha Rani,<sup>1</sup> R. Rushikesh<sup>1</sup>**

*Department of Endocrinology and Metabolism, <sup>1</sup>Senior Resident, <sup>2</sup>Assistant Professor.  
Narayana Medical College and Hospital, Nellore*

#### **ABSTRACT**

**Background:** Obesity is increasing rapidly in developing countries undergoing rapid nutrition and lifestyle transition. Obesity and associated insulin resistance are considered the main risk factors for developing type 2 diabetes mellitus, regardless of genetic predisposition.

**Aims:** The aim of this study was to analyze the prevalence of abnormal glucose tolerance and insulin resistance in obese children and adolescents.

**Material and Methods:** In this prospective case control study, a total of 84 obese children and adolescents were recruited. All patients underwent oral glucose tolerance test (OGTT) with blood samples at 0 and 2nd hour. Fasting insulin and lipid profiles were also estimated in each case.

**Results:** The prevalence of impaired fasting glycemia (IFG), impaired glucose tolerance (IGT), type 2 diabetes mellitus and normal glucose tolerance was found to be 13.09% (11/84), 15.47% (13/84), 1.19% (1/84) and 80.95% (68/84) respectively. Fasting insulin levels ( $P < 0.001$ ) and insulin resistance calculated by HOMA-IR ( $P < 0.001$ ) were significantly higher in obese children compared to the control group. Obese children had significantly higher serum total cholesterol ( $p = 0.002$ ), triglycerides ( $p < 0.001$ ), LDL-C ( $p = 0.003$ ) and decreased HDL-C ( $p < 0.001$ ) compared to control group.

**Conclusions:** Insulin resistance is highly prevalent in obese children and adolescents. Therefore, obese individuals are more prone for abnormal glucose tolerance and are to be screened by OGTT.

**Prasad NR, Reddy PA, Karthik TS, Chakravarthy PM, Faizal NA, Radha Rani P, Rushikesh R.** A study on prevalence of abnormal glucose tolerance and insulin resistance in obese children and adolescents. *J Clin Sci Res* 2013;2(Suppl 1):S6.