Obese Prader-Willi versus Obese controls: Metabolic Profile in Brazilian Patients

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BACKGROUND

Prader-Willi Syndrome is a rare condition (1:15000) which starts with intense hypotonia in the first years of life to reach a condition of voracious appetite which leads to life threatening obesity. Obese Prader-Willi Syndrome (OPWS) patient has peculiar characteristics which could confer different metabolic profiles compared with obesity of other causes.

OBJECTIVE

The aim of this study is to describe and compare the metabolic profile in obese patients and OPWS patients followed in a Pediatric Endocrinology outpatient unit.

METHOD

We evaluated in a cross-sectional study 45 obese patients and 22 OPWS between 8 and 20 years old and compared them according to serum cholesterol, triglycerides, glycated hemoglobin (A1c) and fasting glucose levels. Values of LDL>130mg/mL, HDL<40mg/dL, triglycerides>150 mg/mL, A1c >5.7% and fasting glucose>100mg/dL were considered abnormal.

RESULTS

Both OPWS and obese groups did not differ in sex, age and BMI Z-SCORE (Table1). Probably due to the low number of patients, there had been no significant difference between both groups about LDL, HDL and triglycerides levels. However, there was a significant difference (p<0.001) in abnormal A1c between OPWS and obese patients (Graphic 1). Only 1 patient in each group had high fasting blood glucose.

CONCLUSION

The comparison between obesity in PWS and in other patients shows that A1c tends to be higher in OPWS. The differences in lipid levels show a tendency of more elevated levels in OPWS but the number of patients is small to reach statistical significance.

Table1. Characteristics of 67 patients

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Description</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean age</td>
<td>Years old</td>
<td>14.1 ± 3.2</td>
</tr>
<tr>
<td>Z BMI</td>
<td></td>
<td>+3.1 ± 0.6SD</td>
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<tr>
<td>Gender</td>
<td></td>
<td>45 Male, 22 Female</td>
</tr>
</tbody>
</table>

Graphic 1. Lab Exams OPWS x Obese

![Graph showing Lab Exams comparison between OPWS and Obese patients](image-url)