INTRODUCTION

- Studies have demonstrated that second-generation antipsychotics (SGAs) induce weight gain and metabolic adverse effects\(^1\), but underlying mechanisms are not fully understood\(^2\).
- Leptin, adiponectin and ghrelin (hormones involved in regulation of energy balance) seem to be associated with the development of SGA-related metabolic disturbances\(^2,3\).

METHODS

Non-controlled longitudinal observational study

N=87 subjects aged 4-17 years
- 64% males, 92% caucasian
- Any psychiatric diagnosis (43.7% psychotic disorder)
- 6 months of uninterrupted treatment with the same SGA

RESULTS

I) Baseline

- No significant differences in sociodemographic variables between treatment groups
- Weight, BMI z-scores, leptin and ghrelin levels, and metabolic measurements within normal limits; no significant differences between treatment groups.
  - Except for adiponectin (higher in the risperidone group (p=0.02)

II) Changes baseline \(\rightarrow\) 6th month

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>Baseline</th>
<th>6th month</th>
<th>p values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight (kg), mean (SD)</td>
<td>63.2 (16.2)</td>
<td>81.8 (20.5)</td>
<td>p&lt;.001</td>
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<tr>
<td>BMI z-score, mean (SD)</td>
<td>-0.16 (1.16)</td>
<td>0.68 (1.4)</td>
<td>p&lt;.001</td>
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<tr>
<td>Waist circumference (cm), mean (SD)</td>
<td>72.4 (13.0)</td>
<td>81.1 (15.7)</td>
<td>p&lt;.001</td>
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<tr>
<td>Leptin (ng/mL), mean (SD)</td>
<td>110.4 (14.7)</td>
<td>148.1 (13.2)</td>
<td>p&lt;.001</td>
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<tr>
<td>Adiponectin (μg/mL), mean (SD)</td>
<td>11.3 (4.14)</td>
<td>10.2 (5.8)</td>
<td>p=0.08</td>
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<tr>
<td>Ghrelin (pg/mL), mean (SD)</td>
<td>1118.7 (467.1)</td>
<td>986.1 (530.5)</td>
<td>p=0.015</td>
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*Statistically significant values in bold. Abbreviations: BMI: Body mass index. paired t test and Wilcoxon test

CONCLUSION

- Leptin and adiponectin may be associated with weight gain and metabolic disturbances in young treatment-naïve patients treated with second-generation antipsychotics.

References


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