Antipsychotics and metabolic syndrome in advanced Huntington’s Disease

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Background
Metabolic syndrome may occur as an adverse effect of both typical and atypical antipsychotics (AP). It may reduce life expectancy and quality of life of patients. In mental health institutions, protocols describe to perform blood tests and somatic screening in patients who are taking antipsychotics. When complications occur, psychiatrists switch antipsychotic or adjust doses. These protocols are rarely used in nursing homes, due to limited life expectancy of the majority of patients. AP are often prescribed to patients with Huntington’s Disease (HD) to reduce chorea, aggressive behavior or psychotic symptoms. Since diagnoses, HD patients have a life expectancy of up to 20 years. Little is known on prevalence of metabolic syndrome in HD.

Aims
To determine the prevalence of metabolic syndrome in patients with Huntington’s Disease on antipsychotics.

Methods
We performed blood tests in 28 institutionalized HD patients. In addition, we assessed blood pressure, BMI and abdominal circumference, risk factors such as smoking and family history for diabetes and cardiovascular disease.

Results
Twenty-eight HD inpatients were on AP drugs and expected to live at least 5 years. Of these patients, 10 (36%) patients met the criteria of metabolic syndrome of the US National Cholesterol Education Program (NCEP) (Table 1). Seven (25%) patients had the combination of elevated triglycerides levels and reduced HDL levels (Table 2). Five (18%) patients (all male) on atypical AP turned out to have slightly raised prolactin levels. Four (14%) patients met the criteria of type 2 diabetes, and started a diet and/or medication. Finally, 2 (7%) patients had mild gynecomastia.

Conclusions
We found a high prevalence of metabolic syndrome in HD patients with AP. The type 2 diabetes was presented as atypical, without the usual symptoms such as polydipsia, polyuria and weight loss. We expected to find high cholesterol levels due to the diet that is enriched with kcal and fat many HD patients have to prevent weight loss.

Table 1 Criteria metabolic syndrome of the USA NCEP
1. Abdominal obesity: male > 102 cm / female > 88 cm
2. Triglycerides ≥ 1.7 mmol/l
3. HDL cholesterol: male < 1.0 mmol/l / female < 1.3 mmol/l
4. Glucose ≥ 6.1
5. Blood pressure ≥ 130/85

Table 2 Characteristics and outcomes of 28 HD patients on antipsychotics

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<thead>
<tr>
<th></th>
<th>Male n=15</th>
<th>Female n=13</th>
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<tbody>
<tr>
<td>Age in years; mean ± sd (range)</td>
<td>51.1 ± 9.0 (31.9 – 67.1)</td>
<td>57.6 ± 9.1 (35.3 – 87.4)</td>
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<tr>
<td>Metabolic syndrome; no. of patients (%)</td>
<td>4 (27)</td>
<td>6 (46)</td>
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<tr>
<td>New diabetes; no. of patients (%)</td>
<td>0 (0)</td>
<td>2 (15)</td>
</tr>
<tr>
<td>Raised Prolactine levels; no. of patients (%)</td>
<td>5 (2)</td>
<td>0 (0)</td>
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