Long-Term Treatment with Cannabis-based Medicines in two Children with Tourette Syndrome

Natalia Szejko, Lara-Katharina Woerner, Carolin Fremer, Kirsten-Müller Vahl

- Clinic of Psychiatry, Social Psychiatry and Psychotherapy, Hannover Medical School, Hanover, Germany
- Department of Clinical Neurosciences, University of Calgary, Alberta, Canada

**Background**
- Cannabis-based medicine (CBM) is recommended for the treatment of tics in otherwise treatment-resistant patients with Tourette syndrome (TS) in adults.
- However, evidence in children with TS is very limited.
- Long-term effects of CBM in this population are unknown.

**Case 1**
- **Age of 6**
  - Diagnosis of TS and ADHD
  - Initiation of treatment with CBM
  - Risperidone, aripiprazole, tiapride, guanfacine HRT
  - Reduction of tics, depressive symptoms, improvement of ADHD, stress and behavior improvement of quality of life

**Case 2**
- **Age of 6**
  - Onset of tics
  - Initiation of treatment with CBM
  - Treatment started by parents
  - Taking 0.2g medicinal cannabis (Hindu Kush or Gorilla Glue, both containing 20-25% THC) twice per day

**Conclusions**
We present two cases of minors with TS who started CBM treatment at the age of 8 and 12 years, respectively and continued treatment for five to six years resulting in clinically relevant symptom improvement without side effects or negative impact on cognitive and academic performance.

**Case 1: Clinical measurements before and after treatment with CBM**

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<thead>
<tr>
<th>Measure</th>
<th>Before Treatment</th>
<th>3 months follow-up</th>
<th>6 months follow-up</th>
<th>1 year follow-up</th>
<th>2 years follow-up</th>
<th>3 years follow-up</th>
<th>4 years follow-up</th>
<th>5 years follow-up</th>
<th>6 years follow-up</th>
<th>Long-term follow-up 8 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>6 years</td>
<td>8/12 years</td>
<td>10 years</td>
<td>12 years</td>
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<td>18 years</td>
<td>20 years</td>
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**Side effects**
- **Case 1**: Tiredness at the beginning of the treatment
- **Case 2**: None

**Treatment started by parents**

**Enhancements**
- CBM recommended for treatment of tics in otherwise treatment-resistant patients with Tourette syndrome (TS) in adults.
- Evidence in children with TS is limited.
- Long-term effects of CBM in this population are unknown.

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