GLP-1 Receptor Agonist in a Patient with Cranioopharyngioma-Related Obesity.

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Background and Objective

Cranioopharyngioma is a histologically benign tumor with aggressive clinical presentation, whose management constitutes a big challenge. Hypothalamic syndrome with consecutive obesity occurs in up to 35% of patients at diagnosis, but dramatically increases after treatment 1,2. Glucagon-like peptide 1 (GLP-1) receptor agonists have been successfully used in adults with hypothalamic obesity, showing a BMI decrease and metabolic profile improvement 3. Data on GLP-1 receptor agonist treatment for children and adolescents is limited. Herein, we present a clinical case of a male adolescent treated with GLP-1 receptor agonist for hypothalamic obesity, secondary to cranioopharyngioma.

Case Presentation

A 15.8 year-old male presented for evaluation of delayed puberty and progressive growth failure.

Family history:
- Oldest of 4 children born to a Swiss non-consanguineous couple. Uneventful family history.

Personal medical history:
- Born full term, eutrophic, after an uneventful pregnancy.
- Clit-lip operation during the 1st year of life.
- Developmental milestones normally achieved.

Clinical examination at 15.8 years:
- Height-SDS: -2.59; BMI-SDS: +0.82. No dysmorphic signs. Normal olfaction.
- Tanner: A1PP2G2. Testicular volume: 4ml bilaterally
- Bilateral gynecomastia.
- Normal neurological and ophthalmologic examination.

Laboratory and radiologic evaluation

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<tr>
<th>Patient</th>
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<th>LHRH stimulation test</th>
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<td>Prolactin</td>
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BMI evolution chart

- Diagnosis: Gamma-knife
- Exenatide 5mg 2x/d
- GL + testosterone

Discussion & conclusions

GLP-1 receptor agonist treatment appears to be promising in adolescents with hypothalamic obesity. Further studies with larger cohorts are required in order to evaluate longtime effectiveness on BMI and metabolic control.

References