CHH is a rare disease with a complex clinical picture and genetic background. In up to 50% genetic mutations are found. Genetic tests showed a monoallelic loss-of-function NOS1 mutation (M619L+/+) in the father and the three middle sons (fig. 1), consistent with an autosomal dominant mode of inheritance. No genetic mutation was found in the other sons and in the mother with delayed puberty. Caused by the oligogenic mode of inheritance only our patient had CHH.

- Segregation analysis of the family
- Whole exome sequencing
- Assessment of NOS1 mutants’ activity by their ability to promote nitrite and cGMP in vitro.

CASE PRESENTATION

- At the age of 16 years a boy presented at our clinics with delayed puberty.
- By LH-RH and HCG testing hypogonadotropic hypogonadism was diagnosed.
- The patient’s personal and family history showed many symptoms of complex CHH:

- M619L/+
- +/+
- +/+
- +/+
- +/+

Figure 1: Two generations’ pedigree

Table 1: Symptoms of the five sons

<table>
<thead>
<tr>
<th>Son</th>
<th>II 1</th>
<th>II 2</th>
<th>II 3</th>
<th>II 4</th>
<th>II 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hearing loss</td>
<td>?</td>
<td>?</td>
<td>deafness</td>
<td>?</td>
<td>(+)</td>
</tr>
<tr>
<td>Tests</td>
<td>Normal</td>
<td>Retractile testes</td>
<td>Retractile testes</td>
<td>Sliding testis</td>
<td>Normal</td>
</tr>
<tr>
<td>Oligodontia</td>
<td>Normal</td>
<td>Normal</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Kidneys</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>Renal duplication</td>
<td>?</td>
</tr>
<tr>
<td>Hypertelorism</td>
<td>?</td>
<td>?</td>
<td>?</td>
<td>+</td>
<td>?</td>
</tr>
</tbody>
</table>

REFERENCES


CONTACT INFORMATION

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