Side effects related to GnRH analogues and Cross-Sex Hormonal therapy in Transgender Youth

Mora Palma C1, Guerrero Fernández J1, Itza Martín N2, Ortiz Villalobos A3, Barreda Bonis AC3, Salamanca Fresno L4, González Casado I5

1 Pediatric Endocrinology Department. University Hospital La Paz, Madrid, Spain. 2 Psychiatry Pediatric Department. University Hospital La Paz, Madrid, Spain.

INTRODUCTION and OBJECTIVES

- Transsexuality during childhood/adolescence is a complex condition usually ending in dysphoria (GD).
- The prevalence of transgenderism is increasing in Pediatrics.
- In the process of sexual reassignment, a correct pharmacological treatment and the knowledge of possible consequences are necessary.
- The objective of this study is to present the evolution of the physical and analytical characteristics and side effects in Transgender children and youth with pubertal blockade (PB) and/or cross-sex hormone (CSH) therapy.

METHODS

- 102 patients (age ranged from 5.8 to 16.1 years) with GD followed in the Endocrinology Unit of a tertiary hospital during 3.1 years.
- The 52% (n=53) are biological women (female to male -MtF- group) and the 48% (n=49) are biological men (male to female -FtM- group).
- GD is present from early childhood in 85% and persists in all patients nowadays.

RESULTS

Cross-sex Hormone therapy

- 36 patients receiving cross-sex hormone treatment (29 associated to CSH).
- The ONSET OF TREATMENT ranges from 14.8 to 16.4 years (19 cases FtM, 17 cases MtF).

TREATMENT REGIME:

- In MtF: 17β-Estradiol (oral / transdermal) associated to PB.
- In FtM: Testosterone Cyponate (intramuscular/ subcutaneous) associated to PB only during the first year.

Pubertal Blockade therapy

- 66 patients are treated with GnRH analogues (29 associated to CSH).
- The ONSET OF TREATMENT ranges from 9.8 to 16.3 years.

- TREATMENT REGIME:
  GnRH AGONISTS (monthly/ quarterly), observing LH <0.5 mIU/ml at 3 months after the start of treatment.
  - MtF:
    • Penile erections stopped in all MtF after the first dose.
    • The testicular volume decreased since the 3rd/6th month in the 75% of the patients MtF.
  - FtM:
    • The menstruation disappeared in the FtM with monthly preparation after the first dose, if the preparation was quarterly they presented one or two menstrual cycles.

CHANGES OBSERVED IN THE PHYSICAL EXAMINATION (patients with Cross-Sex Hormone therapy):

- No treatment
- Only Pubertal Blockade (PB)
- Only Cross-Sex Hormones (CSH)
- PB and CSH

<table>
<thead>
<tr>
<th>Cross-Sex Hormone therapy</th>
<th>Patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mood changes</td>
<td>40%</td>
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<tr>
<td>Weight gain</td>
<td>30%</td>
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<tr>
<td>Hematocrit increased (in MtF)</td>
<td>29%</td>
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<tr>
<td>Headache</td>
<td>28%</td>
</tr>
<tr>
<td>Dizziness</td>
<td>7%</td>
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<tr>
<td>Higher total cholesterol (in MtF)</td>
<td>4%</td>
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<tr>
<td>Insomnia</td>
<td>4%</td>
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<tr>
<td>Liver dysfunction, thromboembolic events</td>
<td>0</td>
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</tbody>
</table>

CONCLUSIONS

- GD management should be multidisciplinary, requiring a correct diagnosis of GD by mental health specialist and it is necessary the application of standardized therapeutic protocols.
- Pharmacological treatment in transsexual subjects involves anthropometric, physical and metabolic changes; long-term studies are needed in Pediatrics.

REFERENCES/ BIBLIOGRAPHY