

Juvenile Autoimmune Hypothyroidism and Gender Dysphoria: A Causal Relationship or A Casual Coincidence?

Sir,

We hereby report the case of a 24-year-old girl referred to us for evaluation of poor growth and irregular menstrual cycles. The mother noted that there was almost no linear growth since the age of 8 years, but no medical opinion was sought for the same. The girl had attained spontaneous menarche at the age of 14 years and menstruates once in 3–4 months. We also noticed that the patient was dressed like a boy. On further enquiry, the patient expressed her desire to be identified as a male and that she has been harboring such feelings since her childhood. Her mother also revealed that the patient liked to play with boys and dress up in male clothes. On examination, her height was 115 cm (<third percentile, ht standard deviation score (SDS) of -8.8), target height = 156 cm (target ht SDS -0.44), and weight 24.5 kg (<third percentile). She had no goiter and her skin was very dry [Figure 1]. She had normal female genitalia and her breasts were Tanner stage 3. Laboratory results showed the following: thyroid-stimulating hormone >100 uIU/mL, free T4 <0.4 ng/dL, T3 <0.5 nmol/L, anti-TPO-positive, bone age of 7 years, and Karyotype 46XX. Psychiatric evaluation revealed that the patient indeed had gender identity disorder.

A literature search on this strange association of undetected, untreated juvenile autoimmune hypothyroidism and gender identity disorder revealed a paucity of data on the subject. An earlier study^[1] had reported an association between thyroid dysfunction in pregnancy and same-sex attraction/gender nonconformity in the offspring. Hence, we also evaluated the mother to find out whether she had any undetected hypothyroidism or thyroid autoimmunity which was negative. The mother did not have any history of hypothyroidism during her pregnancy. Earlier studies have also hinted at a possible relationship between polycystic ovarian syndrome and thyroid autoimmunity in female-to-male transsexuals.^[2] Another study reported a higher prevalence of autoimmune thyroiditis in same-sex married Danish individuals.^[3] A possible theory



Figure 1: Patient with juvenile hypothyroidism with severe short stature and cross-dressing, accompanied by mother

behind this association would be the effect of a reduced supply of thyroid hormones for optimal brain development including those areas for sexual orientation. Another consideration which merits further research would be whether less vital neurons are sacrificed for the more crucial ones for preservation of intelligence when the thyroid hormones are low.^[1] Whether this association is purely coincidental or there is a causal relationship merits further research. Another interesting finding will be whether this gender dysphoria will persist after the correction of hypothyroidism which will require further follow-up of the patient and reassessment which we intend to do.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published

and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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