

Sexual function in young transgender individuals: the impact of gender-affirming hormone therapy

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Background and Introduction

Despite the increasing number of transgender and gender-diverse (TGD) individuals undergoing gender-affirming hormone therapy (GAHT), its effects on sexual function and genitourinary symptoms remain poorly characterized. Sexual health in the TGD population is frequently under-addressed due to healthcare access barriers, gender dysphoria, and social stigma.

We conducted a prospective observational case-control study to evaluate the impact of GAHT on sexual function and genitourinary symptoms in assigned female at birth (AFAB) TGD individuals.

Materials and Methods

Validated questionnaires (FSFI-6, MRS, and IPSS) were administered at baseline and at 3, 6, and 12 months after initiation of GAHT. Thirty-nine transgender and gender-diverse assigned female at birth individuals and 39 cisgender women were enrolled between 2023 and 2025. TGD AFAB participants were recruited from the Endocrinology Units of the University Hospital of Padua. In parallel with questionnaire assessments, serum LH, FSH, 17 β -estradiol, and total testosterone levels were measured.

Results

After six months of gender-affirming hormone therapy (GAHT), transgender and gender-diverse assigned female at birth (TGD AFAB) participants showed a statistically significant increase in the desire and arousal domains of the Female Sexual Function Index (FSFI) compared with baseline. No significant correlation was observed between free testosterone levels and FSFI scores. Over time, genitourinary and vasomotor symptoms developed, consistent with a low-gonadotropin iatrogenic menopause characterized by a hormonal profile distinct from that of typical high-gonadotropin menopause.

Conclusions

Testosterone-based GAHT induces significant changes in sexual function and genitourinary health in TGD AFAB individuals. While improvements in sexual desire, arousal, and mood were observed, the development of vasomotor and lower urinary tract symptoms warrants clinical attention. These findings highlight the need for a multidisciplinary and inclusive approach that integrates sexual health assessment into gender-affirming care.

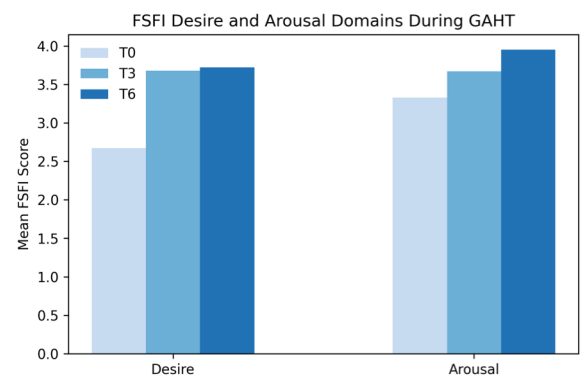


Figure 1. Mean scores of the Desire and Arousal domains of the FSFI at baseline (T0), 3 months (T3), and 6 months (T6) after initiation of gender-affirming hormone therapy. Both domains showed a statistically significant increase over time.

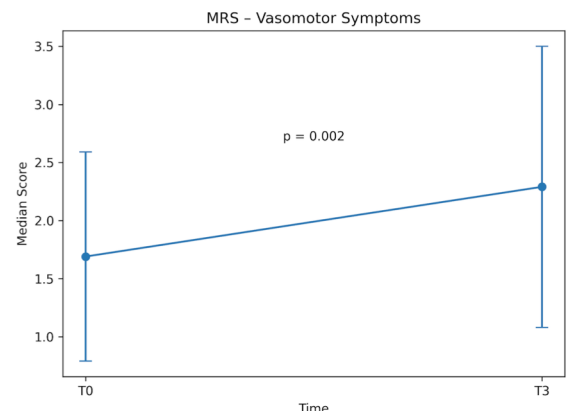


Figure 2. MRS vasomotor symptoms scores increased significantly from baseline (T0) to 3 months (T3) ($p = 0.002$). Data are shown as median \pm SD.