

Histopathologic Findings of Gynaecologic Tissue in Transmasculine and Gender-Diverse individuals Using Testosterone: a Nationwide Cohort Study

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Abstract

Background

The number of transmasculine and gender-diverse (TMGD) individuals that refrain from removing their internal genitalia has been increasing. However, the association between testosterone use and the risk of gynaecological malignancies remains unclear.

Objective

We aimed to evaluate incidences of gynaecological (pre)-malignancies in a nationwide cohort of TMGD individuals using testosterone treatment.

Methods

This retrospective cohort study, conducted at Amsterdam University Medical Centre in the Netherlands, included TMGD individuals receiving testosterone between 1972 and 2018. Data from medical records were linked to the Dutch national pathology database (PALGA) to acquire gynaecological (pre)-malignancy diagnoses. Individuals assigned female at birth who received testosterone were included. Based on observed and expected cases, age-adjusted standardised incidence ratios (SIR) were calculated to assess relative risk compared to cisgender women.

Results

The cohort comprised 1955 TMGD individuals. Median duration of testosterone usage was 1.7 years (IQR 1.4 – 2.4) before hysterectomy and oophorectomy. Median age at time of pathology was 24 years (IQR 20 – 33) for uterine and ovarian histopathology and 29 (IQR 22 – 39) for

vaginal and vulvar histopathology. No gynaecological malignancies were found, precluding SIR calculation. Expected incidence was 0.26 or less for all cancer types. One ovarian borderline tumour, one case of simple endometrial hyperplasia and one case of vulvar intraepithelial neoplasia III (VIN3) were detected. Based on the expected number of >VIN2 cases in our cohort (4.4) the age-adjusted standardised incidence ratio for >VIN2 was 0.23 (95% CI: 0.01 – 1.12).

Conclusion

This is the largest cohort to date reporting on gynaecological histopathologic findings in TMGD individuals using testosterone. Based on these findings, the risk of gynaecological malignancies does not seem increased in TMGD individuals using testosterone compared to cisgender women. However, to determine the long-term effects of testosterone on gynaecological organs, studies with longer follow-up are needed.