Incidence of cervical intraepithelial neoplasia and cervical cancer in transmasculine and gender diverse individuals using testosterone: a retrospective, single-centre cohort study

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Background

The number of transmasculine and gender diverse (TMGD) individuals who retain their uterus or postpone surgery while using testosterone is increasing. However, the influence of exogenous testosterone on the risk of cervical cancer remains unclear.

Objective

This study aims to assess the risk of cervical cancer and intraepithelial neoplasia in TMGD individuals undergoing testosterone treatment.

Methods

This retrospective, cohort study was conducted at the Amsterdam University Medical Centre in the Netherlands, included transmasculine and gender diverse (TMGD) individuals receiving testosterone at our clinic between February 17, 1972 and December 3, 2018. Data from medical records were linked to the national pathology database to acquire diagnoses related to cervical cancer or cervical intraepithelial neoplasia (CIN). Individuals assigned female at birth who received testosterone were included, excluding those last seen before 1991. Lesions ≥CIN2 were classified as “high grade”, considering their increased cancer progression risk. 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 2095 TMGD individuals; 1200 participants underwent hysterectomy, and cervical biopsies obtained from seven patients. Median testosterone exposure time was 1.7 years (IQR 1.3– 2.5). No cervical cancer cases were observed (0·30 (95%CI -0·8 –1·4) expected). Five cases of ≥CIN2 (0.002%) were observed, versus 9·5 expected (SIR 0·53 (95% CI 0·19 –1·17).

Conclusion

In this large cohort with several years of testosterone exposure we did not observe any cervical cancer, nor did we observe an increased risk of ≥CIN2. These findings should be interpreted with caution, as the relatively short median time of follow-up and lack of data on HPV infection prevalence and cervical screening may introduce bias. Longer follow-up studies incorporating this information are needed.