

Characterization of prostate cancer in transgender women

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Background

The risk of developing prostate cancer (PC) in transgender women is unknown. Many patients are unaware that the prostate is not removed during male-to-female surgical transition. It is unclear what the exposure of estrogens and androgen blockers in these transgender patients has on the prostate. Our aim was to examine and characterize the different presentations of PC in published cases and augment this with an additional case series from one institute.

Methods

A retrospective review of prospectively maintained medical records was performed identifying features of PC diagnoses in transgender women. These included age, duration of feminizing hormone therapy, PSA values at time of diagnosis, Gleason grade, and M stage. These were compared with a series of published cases of PC in transgender women, compiled after a systematic literature review using PubMed to review all literature in the English language reporting a case of prostate cancer in a transgender woman, published between January 1st, 1971 and December 31st, 2021. The review was conducted in accordance with PRISMA guidelines. The keywords used included “prostate cancer,” “transgender,” “transsexual,” “trans,” “male-to-female,” “Gleason score,” and “prostatectomy.”

Results

We identified thirteen cases of PC in transgender women; eleven from published cases from 1975-2021 and two from our database. Several differences were identified between the published cases from the last 50 years and the two from our contemporary database: The average age in each group was 64 and 56, average duration on therapy was 22 years and 5.5 years, PSA values were 61.54 ng/dL and 1.4 ng/dL, and median Gleason grades were 8 and 6, respectively. Of the 9 published cases which discussed metastases, 6 (67%) had metastatic disease on presentation compared to 0% in the contemporary cohort.

Conclusions

There is a paucity of data describing the risk of prostate cancer in transgender women. The current published data available to inform clinical practice is predominantly comprised of case reports, many of which are dated. Historically, patients present with advanced disease when compared to their recent counterparts, which may be explained by a variety of biopsychosocial factors. There is a need for contemporary data to inform and formalize standards for screening, diagnosis, and treatment within this group.