Bicalutamide as an anti-androgen in trans people: a cross-sectional study

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Background

Bicalutamide is a potent non-steroidal androgen receptor antagonist. There is community interest in its use as part of feminising hormone therapy, though data on its efficacy and safety compared to spironolactone and cyproterone is limited.

Methods

We conducted a cross-sectional study of trans people treated with bicalutamide for greater than six months by the Austin Gender Clinic and private endocrinologists. Outcomes included serum total testosterone, serum estradiol and alanine transferase (ALT) given theoretical concerns about hepatotoxicity. Comparison was made to historical cohorts treated with spironolactone, cyproterone or estradiol alone.

Results

Ten patients treated with bicalutamide for greater than six months were identified. The median age was 28 years (24-40), duration of hormone therapy 21 months (14-37) and bicalutamide dose 25mg daily (25-50). On univariate analysis, the median total testosterone level was 4.5 nmol/L (0.5-17.8) in the bicalutamide group, 0.8 nmol/L (0.6-1.2) in the cyproterone group (p=0.26), 2.0 nmol/L (0.9-9.4) in the spironolactone group (p=0.76) and 10.5 nmol/L (4.9-17.2) in the estradiol alone group (p=0.47). However, the bicalutamide group was small reducing statistical power, and most had previously been treated with spironolactone or cyproterone confounding results. Serum estradiol levels and ALT were similar between groups.

Conclusions

There was no between-group difference in serum total testosterone levels, estradiol levels or ALT in this small sample of trans people treated with bicalutamide compared to those treated with spironolactone, cyproterone acetate or estradiol alone. Prospective studies with clinically meaningful endpoints are required to evaluate the efficacy and safety of bicalutamide in trans people.