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REAL WORLD STUDY ON ORAL ESTRADIOL TREATMENT IN TRANSGENDER WOMEN

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OBJECTIVES
Treatment of transgender females (TGF) targets maintenance of physiological cisgender female hormone levels. This study evaluates dose effectiveness of oral estradiol valerate (EV) with (A) anti-androgens (spironolactone, finasteride), (B) post-orchiectomy or (C) GnRH-a/gonadotropin-releasing hormone agonists.

METHODOLOGY
We retrospectively evaluated Indian TGF on EV with (A), (B) or (C) with at least one year of follow-up. EV dose, changes in 17-β estradiol (E2) and testosterone (T) levels and achievement of target (E2>100 pg/ml; T<100 ng/dl) were assessed.

RESULTS
Overall cohort had 103 TGF: 41 were in group A, 22 were in group B, and 40 were in group C. In group A, 15% received spironolactone, 14 % received finasteride and 65% received both. Initial and final mean EV dose in overall cohort was 1.9 ± 0.58 mg and 3.22 ± 1.34 mg respectively, with significant increase in E2 (38.1 ± 21.1 to 92.7 ± 28.0 pg/ml) and decrease in T (587.2 ± 168.0 to 139.9 ± 164.1 ng/dl) from baseline. 32% of the overall cohort achieved target E2 levels and 56% achieved target T levels.

Groups B and C required significantly lower (P<0.0001) final EV dose of 2.73 ± 0.88 mg and 2.6 ± 0.78 mg respectively, compared to 4.1 ± 1.5 mg in group A. Relatively, groups B and C had significantly higher final E2 (P=0.0016), lower final T (P<0.0001) and a significantly greater proportion of subjects achieving target hormone levels: E2 (22%(B), 45%(C) versus 10% (A) and T [(93%(B) 100%(C) versus 2%(A)].

CONCLUSIONS
GnRH-a or orchiectomy, requiring significantly lower doses of EV, was more effective than anti-androgens in attaining target hormone levels in TGF. Spironolactone and finasteride did not help in testosterone suppression.