TransFEM E2+: An expansion of the TransFEM E2 study of estradiol levels in transfeminine individuals receiving estradiol implants as standard care

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Background:
The aim of gender-affirming hormone therapy is to reduce gender dysphoria by aligning physical appearance with gender identity. Estradiol implants provide one option for feminising hormone therapy, although published data for their use in this setting is still lacking. The initial TransFEM E2 study[A] was an audit of 38 patients from April 2019 to November 2022 who received estradiol implants in public sexual health and endocrinology clinics. This study presents information from a larger cohort from April 2019 to March 2026 and will contribute to more detailed information regarding a variety of implant doses and their duration of effect.

Methods:
This study cohort includes estradiol implant recipients at public sexual health and endocrinology clinics, as well as five private clinics, comprising one endocrinology specialist and four primary care sites, from 2019 to 2026. We report results using a 2-level mixed effect model fitted with fixed effects on time since implant, prior implant, implant dose, and a random effect for each individual.

Results:
The following describes our preliminary analysis. One hundred and forty-six estradiol implants were inserted among 64 individuals, each of whom had between one and five implants during the study period. Implant doses ranged from 50mg to 200mg in increments of 50mg, with 100mg being the most common (68%, n= 87). A total of 470 serum estradiol level results were recorded, ranging from 74 to 2009 pmol/L. Most results (67%, n= 316) were in the range of 250-1000 pmol/L. One hundred and thirty-seven results (29%) were <250 pmol/L, and 17 results (3.6%) were >1000 pmnol/L. Few adverse events were reported.

The final analysis will include additional data and is expected to be completed in May 2026.

Conclusion:

Preliminary results from this series consistently demonstrate that implants are a safe and effective option for delivery of feminising hormonal therapy. We found that inclusion of patient age did not add materially to the predictive value of our model, and that for each mg of estradiol in the implant used, serum estradiol level is predicted to rise by 2.23 pmol/L. The next step will be to analyse the data to establish the estimated time for serum estradiol level to fall below 250 pmol/L following estradiol implant insertion.

Disclosure of Interest:
None

Reference:
A: Mesure J, Afrin S, Fitzgerald S, Luu J, Gibberd A, Leigh L, Wynne K. (2023) Oestradiol implants for gender-affirming hormone therapy: an observational study of serum oestradiol levels and consumer survey. *Sexual Health* 20, 550-557. https://doi.org/10.1071/SH23126