

# Outcome and preferences in female-to-male subjects with gender dysphoria: Experience from Eastern India

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## ABSTRACT

**Context:** Awareness of gender dysphoria (GD) and its treatment is increasing. There is paucity of scientific data from India regarding the therapeutic options being used for alleviating GD, which includes psychotherapy, hormone, and surgical treatments. **Aim:** To study the therapeutic options including psychotherapy, hormone, and surgical treatments used for alleviating GD. **Settings and Design:** This is a retrospective study of treatment preferences and outcome in 18 female-to-male (FTM) transgender subjects who presented to the endocrine clinic. **Results:** The mean follow-up was 1.6 years and only one subject was lost to follow-up after a single visit. All subjects desiring treatment had regular counseling and medical monitoring. All FTM subjects were cross-dressing. Seventeen (94.4%) FTM subjects were receiving cross-sex hormone therapy, in the form of testosterone only (61.1%) or gonadotropin-releasing hormone (GnRH) agonist in combination with testosterone (11.1%) or medroxyprogesterone acetate (MPA) depot in combination with testosterone (22.2%). FTM subjects preferred testosterone or testosterone plus MPA; very few could afford GnRH therapy. Testosterone esters injection was preferred by most (72.2%) subjects as it was most affordable while 22.2% chose 3 monthly injections of testosterone undecanoate for convenience and better symptomatic improvement, but it was more expensive. None preferred testosterone gels because of cost and availability concerns. About 33.3% of our subjects underwent mastectomy, 38.9% had hysterectomy with bilateral salpingo-oophorectomy, and only one subject underwent phalloplasty. About 16.7% of FTM subjects presented with prior mastectomy depicting a high prevalence of unsupervised or poorly supervised surgeries not following protocol wise approach. **Conclusion:** Notwithstanding of advances in Standards of Care in the Western world, there is lack of awareness and acceptance in the FTM subjects, about proper and timely protocol-wise management options leading to suboptimal physical, social, and sexual results.

**Key words:** Female-to-male transsexuals, gender identity disorder, hormone and surgical treatments, India, psychotherapy

## INTRODUCTION

The prevalence of gender dysphoria (GD) is estimated to be approximately 1 in 30,000, although some researchers suggest that the prevalence is actually significantly higher than this.<sup>[1]</sup> Gender identity disorder (GID) or GD is

characterized by a strong and persistent identification with the opposite sex and discomfort with one's own sex.<sup>[2]</sup> In May 2013, the Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV) replaced the term GID previously found in the DSM-IV with the term GD. Female-to-male (FTM) denotes assigned female persons who identify oneself as male and male-to-female refers to assigned male persons who identify as female.<sup>[3]</sup> There is growing evidence that transsexualism has biological

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causes, such as brain differences, genetic abnormality, and prenatal exposure to hormones, in addition to psychological and behavioral causes.<sup>[4]</sup> In this study, we retrospectively evaluated the outcome of FTM GD subjects treated in the endocrine clinic of the KPC Medical College, Kolkata, West Bengal, India.

## METHODOLOGY

The reference population comprised FTM subjects attending a single endocrine referral center in Kolkata, in Eastern India, between 2010 and 2015. The endocrine clinic of the KPC Medical College Hospital offers comprehensive care for GD persons. Some of the GD subjects got operated in their preferred institutes, but continued to follow up in our clinic. We have included all subjects receiving consultation and care from the clinic and excluded the subjects recently (<6 months) enrolled for analysis.

The protocol was presented to the Ethics Committee who felt that given the retrospective nature of the study, informed consent could be dispensed with. GD was diagnosed by a mental health professional (MHP) and diagnosed on the basis of DSM-IV Text Revision.<sup>[5]</sup> We excluded transvestism, gay, or lesbians who were not conforming with the laid-down criteria of GD.<sup>[5]</sup> This is a retrospective and cross-sectional outcome study of FTM GD subjects, who presented to the endocrine clinic.

Descriptive statistical analysis was carried out in the present study. Results of continuous measurements are presented as mean  $\pm$  standard deviation and results of categorical measurements are presented in number (%). Microsoft Word and Excel are used to generate graphs and tables, respectively.

## RESULTS

Eighteen FTM transgender subjects were diagnosed by DSM-IV. Of 18 FTM subjects, only one was lost in follow-up after a single visit and is not included in this analysis. Rest of them was evaluated by the psychiatrist to confirm the diagnosis and was counseled by the psychiatrist. All 17 (94.4%) FTM subjects were cross-dressing, 2 (11.1%) subjects were cross-dressing prior to first clinic visit, and the rest 15 (83.3%) started cross-dressing after two–three

contact sessions [Table 1]. The mean follow-up was 1.6 years. Cross-sex hormone therapy was offered to all subjects who were eligible for cross-sex hormone treatment as per laid-down guidelines.<sup>[6]</sup> At the time of analysis, all 17 subjects (94.4%) were receiving cross-sex hormone therapy. Nine (50%) of our FTM subjects had mastectomy, 3 (16.7%) patients already had mastectomy at presentation without going through the protocol-wise approach, and another 6 (33.3%) subjects completed the same as per the Standard of Care under our supervision. Hysterectomy with bilateral salpingo-oophorectomy was done in 7 (38.9%) subjects and only 1 (5.5%) subject underwent phalloplasty [Table 1].

Androgen treatment of FTM transgender is usually uneventful and is treated with three different regimens: With testosterone only, gonadotropin-releasing hormone (GnRH) agonist in combination with testosterone - the ideal regime, and medroxy progesterone acetate (MPA) in combination with testosterone, depending on the response and affordability. Majority (61.1%) are managed with testosterone only. Two (11.1%) received GnRH agonist in combination with testosterone and another 4 (22.2%) received MPA in combination with testosterone as they could not afford GnRH therapy and were having persistent irregular periods/vaginal bleeding [Table 2].

Testosterone therapy in the form of testosterone esters injection every 2–3 weeks was preferred by 13 (72.2%) subjects as it was most affordable. Four (22.2%) of our FTM subjects chose three monthly injections of testosterone undecanoate for convenience and better symptomatic improvement, but it was more expensive. None preferred testosterone gels because of cost and availability concerns.

## DISCUSSION

In the absence of standard clinical practice guideline in India for endocrine treatment of GD, our current treatment approach for transgender individuals is based on the Endocrine Society Clinical Practice Guideline<sup>[6]</sup> and the Standards of Care from World Professional Association for Transgender Health.<sup>[7]</sup> It aims to modify their bodies physically so that they match their gender identities and it is effectively done through four stages. First, counseling to ensure that the transgender individual

**Table 1: Baseline characteristics of the study sample**

| Number | Duration of treatment (years) | Psychiatric counseling (%) | Real-life experience (%) | Cross-sex hormone therapy (%) | Mastectomy (%) | Hysterectomy (%) | Phalloplasty (%) | Lost in follow-up (%) |
|--------|-------------------------------|----------------------------|--------------------------|-------------------------------|----------------|------------------|------------------|-----------------------|
| 18     | 1.6                           | 17 (94.4)                  | 17 (94.4)                | 17 (94.4)                     | 9 (50)         | 7 (38.9)         | 1 (5.5)          | 1 (5.5)               |

**Table 2: Hormone therapy profile of the gender-variant study population**

| Hormone therapy (%) | Testosterone only (%) | Gonadotropin-releasing hormone + testosterone (%) | Medroxy-progesterone acetate + testosterone (%) |
|---------------------|-----------------------|---|---|
| 17 (100)            | 11 (61.1)             | 2 (11.1)  | 4 (22.2)  |

understands the reversible and irreversible effects of hormone suppression, cross-sex hormone treatment, and limitations of reassignment surgery. Second, the real-life experience (RLE) to test the person's resolve, the capacity to function in the preferred gender, and the adequacy of social, economic, and psychological supports.<sup>[6]</sup> Third, cross-sex hormone therapy to induce the development of desired sex characteristics and to decrease the physical characteristics of the undesired sex.<sup>[8]</sup> And fourth, surgery for sex reassignment, which includes breast surgery, genital surgery, and removal of the gonads who fulfills the Eligibility and Readiness Criteria for Sex Reassignment Surgery (SRS).<sup>[6]</sup> However, it is well known that often with the help of psychotherapy, some individuals do not feel the need to feminize or masculinize their body, some patients may need hormones, but not surgery, and many individuals may need both hormone therapy and surgery to alleviate their GD.<sup>[7]</sup> In our experience, many subjects do not complete the whole treatment and even if some of them completes, they fail to adhere to the lifetime commitment for hormonal therapy.

Offering or requesting psychological assistance to individuals with GD is a form of responsible care and all our study subjects completed the sessions with MHPs. MHPs accurately diagnose the individual's gender disorder, any comorbid psychiatric conditions, arrange their appropriate treatment, counsel the individual about the range of treatment options and their implications, engage in psychotherapy, and ascertain the eligibility/readiness for hormone and surgical therapy. MHPs make formal recommendations to the endocrinologists regarding eligibility and readiness for hormone therapy.<sup>[9]</sup>

The RLE is a period of time in which transgender individuals live full time in their preferred gender role. The purpose of the RLE is to confirm that a given transgender person can function successfully as a member of said gender in society, as well as to confirm that they are sure they want to live as said gender for the rest of their life. A documented RLE of at least 3-month duration is a requirement for prescribing hormone therapy and a requirement for performing SRS.<sup>[6]</sup> Two (11.1%) of

our subjects were cross-dressing prior to first clinic visit and the rest 15 (83.3%) started cross-dressing after 2–3 contact sessions. Some of them had initial hesitancy to start cross-dressing in known social circle. They were advised to start cross-dressing in an unknown social circle (during traveling or from beginning of joining a new institution, etc.) and then in family and finally in known social circle.

Cross-sex hormone therapy was started once the MHP ascertained the eligibility and readiness for hormone therapy and the subject demonstrated knowledge and understanding of the expected outcomes of hormone treatment, as well as the medical and social risks and benefits.<sup>[6]</sup> Hormone therapy was individualized, based on a patient's goals, the risk/benefit ratio of medications, the presence of other medical conditions, and consideration of economic issues.<sup>[7]</sup>

Testosterone treatment of FTM transsexuals is effective and well tolerated.<sup>[10]</sup> Goals of hormonal treatment in FTM subjects are elimination of secondary sex characteristics of the female sex and induction of those of the male sex. None of our FTM transgender received any hormonal intervention before presenting to our center. GnRH agonist or depot medroxyprogesterone may be used to stop menses prior to testosterone treatment and to reduce estrogens to levels found in biological males.<sup>[6]</sup>

Cross-sex hormone treatment appears to be safe in FTM transgender.<sup>[11]</sup> Androgen treatment of FTM transgender is usually uneventful and is treated with three different regimens: With testosterone only, GnRH agonist in combination with testosterone, and MPA depot in combination with testosterone, depending on the response and affordability. Majority (61.1%) of our patients were treated with testosterone only. Testosterone therapy in the form of testosterone esters injection every 2–3 weeks was preferred by 13 (72.2%) subjects as it was most affordable. Four (22.2%) of our FTM subjects chose three monthly injections of testosterone undecanoate for convenience and better symptomatic improvement, but it was more costly. None preferred testosterone gels because of cost and availability concerns. Testosterone causes the development of secondary sex characteristics (facial/body hair growth, increased muscle mass/strength, cessation of menses, clitoral enlargement, deepened voice, and vaginal atrophy) and provides patients with a more satisfying body that is more congruent with their male gender identity. Only 2 (11.1%) of our FTM subjects took monthly GnRH agonist (leuprolide acetate) therapy with testosterone, most could not afford GnRH therapy because

of cost considerations. Four of our subjects (23.5%) who continued to have menses despite adequate testosterone replacement and could not afford GnRH therapy required addition of MPA.

Hormonal treatment is followed by surgical ablation of breasts and removal of uterus and ovaries. Breast size only partially regresses with androgen therapy and mastectomy is extremely important ancillary surgery for the FTM transition.<sup>[6]</sup> SRS is recommended only after completion of at least 1 year of consistent and compliant hormone treatment.<sup>[6]</sup> Discussion about mastectomy usually takes place after androgen therapy is begun.<sup>[6]</sup> However, dysphoria related to their breasts is so high that all FTM subjects wish to get rid of them at the earliest possible opportunity and three of our patients had mastectomy prior to presenting to our center. This shows not only the eagerness among the FTM transgender but also the ignorance among surgeons dealing them. Transgender can easily be confused with transvestite and the confusion can lead to a painful surgery and a lifetime of regret. Transvestite may be rushing into mastectomy and SRS as a result of the increased public awareness about transgender people. Top surgery (bilateral mastectomy and male chest contouring) allows a FTM transgender to live more comfortably, improving psychological and social functioning, and it may be the only surgical step preferred. Nine (50%) of our FTM subjects had mastectomy, 3 (16.7%) patients already had mastectomy at presentation without going through the protocol-wise approach, and another 6 (33.3%) subjects completed the same as per standard of care under our supervision.

Seven (38.9%) FTM subjects in our study underwent removal of uterus and ovaries. Phalloplasty is considered the last or the ultimate step in SRS for FTM GD subjects. However, the results of reconstructive surgery remain suboptimal.<sup>[12]</sup> The cosmetic appearance of a neopenis may not be very good and the surgery is multistage and very expensive. Only one of our FTM transgender underwent phalloplasty.

## CONCLUSION

“GD” is an increasingly recognized medical condition with an expanding body of medical literature to support the use of established therapeutic guidelines. Published Standards of Care documents provide clinical guidance for health professionals about the optimal management of transsexual people with safe and effective pathways in achieving their gendered selves and self-fulfillment. More and more transpersons are coming forward with the expressed desire to change the sex assigned at birth

in tandem. Lack of information and awareness among many health personnel often leads to risky procedures and inappropriate handling of people seeking transition, increasing their vulnerability infinitely.

Treatment is available to assist people with such distress and GD can in large part be alleviated through treatment. Medical treatment options include feminization or masculinization of the body through hormone therapy and/or surgery, which are effective in alleviating GD and are medically necessary for many people. Individuals who receive treatment will find a gender role and expression that is comfortable for them, when these differ from those associated with their sex assigned at birth.

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## Conflicts of interest

There are no conflicts of interest.

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