

Transsexualism: Clinical Guide To Gender Identity Disorder

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- Sex Reassignment Surgery

Treatment Needs Include Psychiatric Comorbidities.

Kari Ann Martin, MD

Instructor of psychiatry, department of psychiatry and psychology, Mayo Clinic Scottsdale, AZ

Adults with gender identity disorder (GID)—commonly termed transsexualism—may seek psychiatric assessment and treatment for a variety of reasons. Some—but not all—might be candidates for hormone replacement therapies or sex reassignment surgery (SRS). For those with gender dysphoria, psychological assessment and psychotherapy are suggested and sometimes required.

Your role in the GID patient's gender exploration and transition must be tailored to his or her gender identity and individual circumstances. For patients who are not candidates for surgery or cannot afford it, you may assist in exploring options for living with one's gender identity.

WHAT IS GID?

Gender identity disorder is a rare, complex condition in which individuals of unambiguous genotype and phenotype identify with the opposite gender. One in 54,000 individuals are estimated to have GID:

- * 75% are biologic males desiring reassignment to female gender (MTF)
- * 25% are females desiring to be male (FTM).¹

Persons with GID who undergo sex reassignment surgery represent the severe, dramatic end of a wide spectrum of cross-gender identifications and behaviors that DSM-IV-TR (Table 1)² and the International Classification of Diseases

(Table 2)³ have attempted to classify. GID does not describe intersex conditions such as incomplete masculinization or feminization syndromes with ambiguous genitalia.

Table 1

DSM-IV-TR Criteria For Gender Identity Disorder

Criterion A

A strong and persistent cross-gender identification defined as the desire to be or the insistence that one is of the other sex (must not be merely a desire for any perceived cultural advantages of being the other sex)

Criterion B

Persistent discomfort with one's assigned sex or a sense of inappropriateness in the gender role of that sex

Criterion C

The disturbance is not concurrent with a physical intersex condition (such as partial androgen insensitivity syndrome or congenital adrenal hyperplasia)

Criterion D

The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning

Source: Reference 2

Table 2

ICD-10 Diagnoses For Gender Identity Disorder In Adults

Diagnosis Criteria

Transsexualism

1. Desire to live and be accepted as a member of the opposite sex, usually accompanied by the wish to make his or her body as congruent as possible with the preferred sex through surgery and hormone treatment
2. Transsexual identity has been present persistently for at least 2 years
3. Is not a symptom of another mental disorder or a chromosomal abnormality

Dual-Role Transvestism

1. Individual wears clothes of the opposite sex to experience temporary membership in the opposite sex
2. No sexual motivation for cross-dressing
3. Individual does not desire a permanent change to the opposite sex

Other Gender Identity Disorders

No specific criteria; could be used for persons with an intersexed condition

Gender Identify Disorder, Unspecified

No specific criteria; could be used for persons with an intersexed condition

Source: Adapted from International Classification of Diseases, 10th ed. (ICD-10)

Persons with GID may find ways of living with non-traditional or cross-gendered identities that do not involve altering their bodies. Others feel they must create a physical body that reflects their core gender identity.

Epidemiologic studies of GID are rare, but in a survey by Rachlin et al⁴ of 23 MTFs and 70 FTMs:

- * most underwent hormone therapy (64% of MTFs, 80% of FTMs) and/or name change (45% of MTFs, 72% of FTMs)
- * none of the MTFs had breast augmentation, whereas 52% of FTMs had undergone mastectomy and reconstruction and another 33% were actively planning it
- * 3% of FTMs had genital surgery, 16% were planning it, and 29% had decided definitely not to have it
- * 9% of MTFs decided definitely not to have genital surgery; 23% had undergone genital surgery, and another 35% were actively planning it.

The MTF/FTM differences may reflect the efficacy of cross-hormone therapy in inducing breast growth in MTFs and the cosmetic disappointment, risks, and costs of phalloplasties for FTMs. For patients who pursue genital surgery, the incidence of postoperative regret is low: <1% of FTMs; 1% to 1.5% of MTFs.⁵

Biologic basis. GID's cause remains unknown. Organic differences in brain anatomy have been identified in patients with GID. Zhou et al⁶ showed that the volume of the central subdivision of the bed nucleus of the stria terminalis (BSTc)—a brain area essential for sexual behavior—is larger in men than in women. A female-sized BSTc was found in MTF GID patients.

Research, mainly on biologic boys, indicates that GIDs are usually associated with behavioral difficulties, relationship problems with peers and parents, and—most notably—separation anxiety disorder.⁷ An audit of the files of 124 children and adolescents with GID showed that 42% experienced loss of one or both parents, mainly through separation.⁸

Psychiatric comorbidity. Studies using standardized diagnostic instruments to assess psychiatric comorbidity in GID are rare. A study of 31 patients with GID found that many met diagnostic criteria for lifetime psychiatric comorbidity, including:

- * 71% for Axis I disorders (primarily mood and anxiety disorders)
- * 42% for comorbid personality disorders, primarily a cluster B diagnosis
- * 45% for substance-related disorders
- * 6.5% for psychotic disorders
- * 3.2% for eating disorders.⁹

Persons with GID transgress the traditional binary gender system and as a consequence experience discrimination in employment, social services and housing.¹⁰ Jones and Hill¹¹ have proposed that these experiences result in vulnerability to Axis I disorders.

Treating Patients With GID

Psychotherapy.

GID treatment decisions are made without clear prospective data.

Standards of care are determined by the World Professional Association for Transgender Health (WPATH).¹² Psychotherapy is often given before SRS but is not required. The therapist is left to determine the treatment terms and goals.

Your role in treating patients with GID goes beyond making an accurate diagnosis, identifying comorbid psychopathology, and instituting a treatment plan. Other tasks include:

- * counseling the patient about the range of treatment options and their implications
- * engaging in psychotherapy
- * ascertaining eligibility and readiness for hormones and surgical therapy
- * making formal recommendations to medical and surgical colleagues
- * documenting the patient's relevant history in a letter of recommendation
- * educating support systems
- * being available for follow-up.

Because these tasks may be daunting for one clinician, you might consider referring the patient to a gender disorder clinic (see Related resources).

Candidates for triadic therapy. For appropriately screened adults with severe GID, the therapeutic approach relies on triadic therapy:

- * a 3-phase approach centered around real-life experience in the desired role
- * hormones of the desired gender
- * and surgery to change the genitalia and secondary sex characteristics.

Hormone Therapy

WPATH has established eligibility and readiness criteria for HRT in patients with GID (Table 3).

Administering cross-sex hormones (testosterone in women; estrogens in men) brings about important physical changes as well as psychological relief. The prescribing physician need not be an endocrinologist but should become well-versed in relevant data.

Table 3

WPATH criteria for hormone replacement therapy*

Eligibility criteria

3 criteria exist

1. Patient is at least age 18
2. Patient understands what hormones medically can and cannot do and their social benefits and risks
3. Patients has had either:
 - a. Documented real-life experience of 3 months before the administration of hormones; or
 - b. Psychotherapy after initial evaluation of a duration specified by the mental health professional (usually 3 months)

Providing hormones to patients who have not fulfilled criterion 3 can be acceptable in selected circumstances, such as to facilitate monitored therapy using hormones of known quality as an alternative to black-market or unsupervised hormone use

Readiness Criteria

All 3 must exist

1. Patient has had further consolidation of gender identity during the real-life experience or psychotherapy
2. Patient has made some progress mastering other identified problems leading to improving or continuing stable mental health (this implies satisfactory control of problems such as sociopathy, substance abuse, psychosis, and suicidality)
3. Patient is likely to take hormones in a responsible manner

Source: World Professional Association for Transgender Health (WPATH)

Options include oral, injectable, and transdermal formulations (Table 4); physician discretion and patient preference determine the formulation used.

Table 4

Sample hormonal regimens for transsexual patients*

Medication:

Starting dose:

Subsequent dose:

When to change doses:

Female to Male

Testosterone enanthate or testosterone cypionate

200 mg IM every 2 weeks

100 to 150 mg IM every 2 weeks

After masculinization complete and/or oophorectomy/hysterectomy

Transdermal testosterone

5 mg to skin every day

Usually stays the same

Little data exist on efficacy; effective for maintenance, and may be less efficacious during transition

Male to Female

Conjugated estrogens

1.25 mg/d (or 0.625 mg/d for smokers)

2.5 mg/d (Do not increase in smokers)

To obtain best clinical results, or if testosterone is not suppressed After sexual reassignment surgery, dose may be decreased without losing secondary sexual characteristics

OR oral estradiol

1 mg/d

2 mg/d

OR transdermal estradiol

0.1 mg patch/week

Two 0.1 mg patches/week

Spironolactone

200 mg/d

May discontinue

After sexual assignment surgery

Medroxyprogesterone†

10 mg/d

May increase to 20 to 40 mg/d (usually not needed)

If testosterone is not suppressed and patient/doctor does not want to increase estrogen

OR micronized progesterone

100 mg bid

May discontinue after breast development is complete

Micronized progesterone is more costly but may lessen side effects of anxiety, as compared with medroxyprogesterone

* Professional consensus does not exist regarding the most efficacious and safest dosing regimens for gender transition. This table reflects reasonable starting and maintenance doses that are supported in the (admittedly less than optimal) medical literature, and reflect the author's opinion and practice. This table is not meant to include all possible hormone regimens, only several of the most commonly used medications.

† Professional consensus does not exist regarding progesterone's role in MTF transition.

Adapted and reprinted with permission from Table VII in Oriel KA. Medical care of transsexual patients.

J Gay Lesbian Med Asso 2000;4(4):193.

IM testosterone therapy (standard dose 200 to 250 mg/2 weeks) is complicated by fluctuating serum testosterone levels. Fatigue or irritability can occur when serum testosterone levels are low (on days 10 to 17). Oral testosterone suppresses the menstrual cycle in only 50% of FTMs.

Transdermal testosterone is an option for biologic females who are leery of injections.¹³ Patches result in stable testosterone levels in the male range but may cause skin irritation in >50% of patients. Use transdermal estrogen in males with clotting abnormalities or who are age >40.

Medical workup. Basic medical monitoring includes serial physical examinations, vital signs, weight measurements, laboratory assessment, and screening for pelvic malignancies.

For biologic males receiving estrogen, pretreatment laboratory assessment includes free testosterone, fasting glucose, liver function tests, and complete blood count, with reassessment at 6 and 12 months and annually thereafter.

Obtain pretreatment prolactin levels and repeat annually. If hyperprolactinemia fails to develop within 3 years, no further measurements are necessary. Monitor for breast and prostate cancer, and instruct patients to perform self-breast exams. Following orchiectomy, estrogen doses can be reduced by one-third to one-half.

For biologic women receiving androgen, obtain pretreatment liver function tests and complete blood count, then reassess at 6 months, 12 months, and annually thereafter. Do yearly liver palpation examinations.

Physiologic changes. Biologic males treated with estrogens can expect breast growth, redistribution of fat in keeping with female habitus, decreased upper body strength, decreased body hair, retardation of male pattern balding, diminished testicular size, and decrease in erection firmness and frequency. MTF transsexuals require electrolysis to remove facial hair, as HRT does not do this.

Biologic females treated with testosterone can expect deepening of the voice, clitoral enlargement, mild breast atrophy, increased facial and body hair and male-pattern baldness, increased upper body strength, weight gain, and decreased hip fat.

With effective and continuous dosages, most changes begin in 2 to 4 months, start becoming irreversible in 6 to 12 months, start to level off in 2 years, and are mostly complete in 5 years. Men with insufficient breast growth following HRT may pursue breast augmentation surgery.

Voice changes. Hormone therapy generally is presumed to “masculinize” the voice of FTM transsexuals. In one series, after initiation of hormone therapy, 12 of 16 (75%) FTM transsexuals believed they had a voice that always would be considered masculine.^{14,15}

For MTF transsexuals, no surgical technique of pitch elevation is satisfactorily safe and effective. The most widely used—cricothyroid approximation—may not be long-lasting and can decrease range, loudness, and vocal quality.¹³

HRT COMPLICATIONS

Medical complications. Biologic males treated with estrogens and progestins may be at increased risk for blood clotting, benign pituitary prolactinomas, infertility, weight gain, liver disease, gallstones, somnolence, hypertension, and diabetes mellitus.

Biologic females treated with testosterone may be at increased risk for acne, cardiovascular disease from shifts of lipid profiles to male patterns, benign and malignant liver tumors, and hepatic dysfunction.

Psychiatric issues. Physical masculinization occurs much more rapidly and results in a more convincing opposite sex appearance in FTMs than feminization does in MTFs.^{16,17} Behaving masculine may be more socially acceptable for women and therefore easier than it is for men to behave convincingly feminine without being characterized.

Cross-sex hormones contribute to the expression of sex-dimorphic behaviors in adulthood.^{18,19} Estrogen appears to influence affect intensity, whereas androgens influence aggression and sexual motivation. Earlier studies established that untreated MTFs and FTMs do not differ in sex hormone levels from their biologic counterparts.^{20,21}

After 3 months of HRT, transsexuals' sex hormones are in the range of their identified sex. FTMs treated with androgens become more prone to aggression and exhibit increased sexual motivation and arousability associated with an overall dampened affect. MTFs treated with estrogen show decreased irritability and sexual arousability.²²

Sex Reassignment Surgery

The cost of SRS often is prohibitive. Patients may turn to the Internet or foreign venues for hormone therapy and surgical procedures. Thailand is a popular overseas destination, where the average cost for MTF surgery is approximately \$6,000 to \$9,000. In the United States the cost of counseling, hormones, electrolysis, and surgeries is typically \$30,000 to \$40,000.²³

Surgical options are not limited to genital reassignment but include mammoplasty (breast augmentation for MTF), chest reduction surgery (FTM), trachea shave surgery, forehead/brow ridge contouring, chin and jaw contouring, scalp advancement surgery, cheek implant surgery, alarplasty (nasal base resection to narrow a nose), and chin contouring.

Some insurance companies assert that transsexual procedures are not medically necessary and are declining coverage. WPATH contends that sex reassignment is effective and medically indicated in severe GID.

Postsurgical outcomes. Patients who are emotionally healthy, have adequate social support, and attain reasonable cosmetic results are most satisfied with life after SRS.²⁴ In studies of GID patients, the best predictor of postoperative psychopathology was poor surgical results.²⁵

FTMs are transformed through the use of hormones and generally are not perceived as visibly different from other men. Genital surgery is often seen as a final step in completing the transition to the identified gender.

FTMs may elect to have their female reproductive organs removed, along with construction of male external genitalia through phalloplasty or metoidioplasty.

The decision to pursue surgery and the type of procedure depend on peer influence.²⁶ Although a phalloplasty does not provide a fully functioning and completely authentic-appearing penis, most FTMs report being satisfied with life after surgery and have few regrets.²⁷⁻³¹

Long-term postoperative follow-up by the surgeon and mental health professional is associated with good psychosocial outcome.

Legal considerations. An individual's new surgically created gender can cause legal complications in jurisdictions that do not recognize the new gender. Some states are amending laws to make allowances for these advances in medical science.³²

Related resources

* World Professional Association For Transgender Health. (formerly the Harry Benjamin International Gender Dysphoria Association [HBI/GDA]). www.hbigda.org includes a directory of transgender organizations.

North American gender programs and service centers

- CAMH Gender Identity Clinic. Toronto, Ontario, Canada
- Gender Identity Project, New York, NY
- Gendercare Gender Clinic (Web clinic for gender variance). www.gendercare.com
- Ingersoll Gender Center, Seattle, Washington
- Johns Hopkins Center for Sexual Health & Medicine, Baltimore, Maryland
- Program in Human Sexuality, Transgender Services at the University of Minnesota

Sexology organizations and information

- American Association of Sex Educators, Counselors, and Therapists. www.aasect.org
- Kinsey Institute at Indiana University. www.indiana.edu/%7Ekinsey
- Sexuality Information and Education Council of the United States. www.siecus.org
- Social Science Research Council. www.ssrc.org
- Society for the Scientific Study of Sexuality. www.sexscience.org

Drug Brand Names

- Conjugated equine estrogens • Premarin
- Estradiol (oral) • Estrace
- Estradiol (transdermal) • Climara
- Medroxyprogesterone (oral) • Provera
- Medroxyprogesterone (IM) • Depo-Provera
- Micronized progesterone • Prometrium
- Spironolactone • Aldactone

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