

# Transgender: Crucial Aspects of Hair Transplant Design

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## Overview

- Introduction
- General Background
- Hair Restoration Surgery for Transgender People
- Design Principles
- Conclusion

## Keypoints

- Transgender patients frequently seek hair restoration services.
- Design principles for male-to-female (MTF) transsexuals are the same as those for females.
- Hormone replacement therapy along with DHT blockade with dutasteride is recommended for all MTF transsexuals who have not had orchiectomy.
- Testosterone is the primary hormonal therapy for female-to-male (FTM) transsexuals.
- Hairpieces may be the best option for MTF transsexuals who have Norwood stage V or greater baldness.
- Procedures for transgender patients include hair transplantation, body hair transplant, and hairline advancement (with or without expansion).

## Introduction

Transgender individuals have unique hair restoration requirements. Transgender/trans is an overarching term of many gender identities of those who do not identify or exclusively identify with their birth sex assignment. Transgender, as a term, does not indicate gender expression, sexual orientation, hormonal makeup, physical anatomy, or how one is perceived in daily life.

A transsexual person lives life in a cross-gender social role. A birth-assigned female who lives full time as male would be referred to as a female-to-male (FTM) transsexual.

A person assigned male at birth who lives full time as female would be identified as a male-to-female (MTF) transsexual.

## General Background

There are not good estimates worldwide of the population size of transgender people. In the United

States, a 2016 estimate was about 1.4 million people. It is probable that official data underestimate the number of transgender people. Gender confirmation surgery (GCS) is a surgical procedure by which a transgender person's physical appearance and function of their existing physical sexual characteristics are altered to be like the physical characteristics socially associated with their identified gender. Thousands of gender reassignment surgeries are performed globally annually. A much larger number of transgender patients use hormone replacement and cosmetic surgery to achieve feminization or masculinization.

Gender identity is established in early childhood. Transgender persons typically report identifying as the opposite sex while children. Studies indicate a likely genetic basis. Physical transformation to the opposite sex starts with hormonal therapy followed by a myriad of plastic surgical procedures and culminating in GCS in which the genitalia are converted to the opposite sex.<sup>1,2</sup> Full transformation typically takes many years, great expense, and strong commitment by the patient.

## Hair Restoration Surgery for Transgender People

Frequently, FTM transgender individuals present for transplantation of facial hair, sideburns, moustaches, beards, chest hair, and even axillary hair. Designs for facial and body hair transplantation are discussed in Chapters 28A–C. The primary hormonal therapy for FTM transition is testosterone. One of the effects of testosterone is increasing facial and body hair.

However, the largest proportion of transgender individuals seeking hair restoration are male to female. At the time of initial presentation, most will identify themselves as transgender, will be on hormonal therapy, and will have some degree of androgenetic alopecia (AGA). Some will not have male pattern hair loss (MPHL), but want to convert their male-shaped and positioned hairline to a female hairline. And some transgender patients present for hair restoration very early in their transition; they are not on hormone replacement, may not volunteer transgender identity, and may have very mild or no evidence of AGA. Nevertheless, they request transplantation of a low feminine hairline. In such cases, in our role as hair restoration physicians, in addition to providing hair restoration surgery, we should explore the possibility of transgender identity and if present explore initiation of dihydrotestosterone (DHT) blockade, and referral for counseling and specialty care.

Hormonal therapy for MTF patients usually consists of estrogen, progestins, spironolactone, or, sometimes, bicalutamide, flutamide, gonadotropin-releasing hormone (GnRH) agonists (Lupron), and finasteride or dutasteride. Dutasteride is preferable because of the greater blockade

of DHT. Dutasteride should be initiated even if AGA is not present. It may be advisable for some patients to continue DHT blockage postorchiectomy or GCS, because of the continued low levels of adrenal production of androgens. Most patients will not have further progression after GCS, but a few will and for them dutasteride should be continued.

Hormonal therapy used by MTF patients increases risk of diabetes, atherosclerosis, and deep vein thrombosis (DVT). Pre-op screening for these should be routine. Extra attention to position change and stretch breaks during procedures is important in view of the DVT risk<sup>3</sup> (Table 8C.1).

Facial feminization surgery (FFS), which combines hairline advancement, brow lift, bone contouring such as shaving of frontal bossing, chin, and laryngeal prominence, while remarkable in effect, is not sufficient to achieve a fully feminine appearance in the presence of Norwood stage IIIA or greater AGA. Hair restoration surgery plays a critical role for many patients. Restoration may be achieved by either transplantation, hairline advancement, or both in combination. If a patient is contemplating FFS, it should be done prior to hair transplantation to facilitate proper hairline placement and to avoid disruption of transplanted hair.

## Design Principles

The most critical aspect in hair transplanting MTF transgender patients is that the design is truly feminizing (Table 8C.2; Fig. 8C.1). Simply advancing the hairline and temporal recession is not sufficient (Fig. 8C.2). We need to look at the design requirements of female hairline

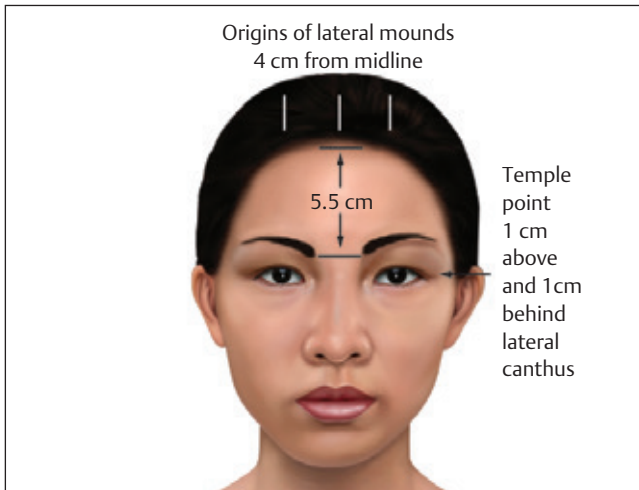
**Table 8C.1** Hormonal therapy for transgender physical transition

Female-to-male (FTM)	Testosterone
Male-to-female (MTF)	Androgen agonists Spironolactone Bicalutamide, flutamide DHT blockers Finasteride, dutasteride GnRH agonists Lupron Estrogen, progestins

Abbreviations: DHT, dihydrotestosterone; GnRH, gonadotropin-releasing hormone.

**Table 8C.2** Hair restoration requirements of transgender people

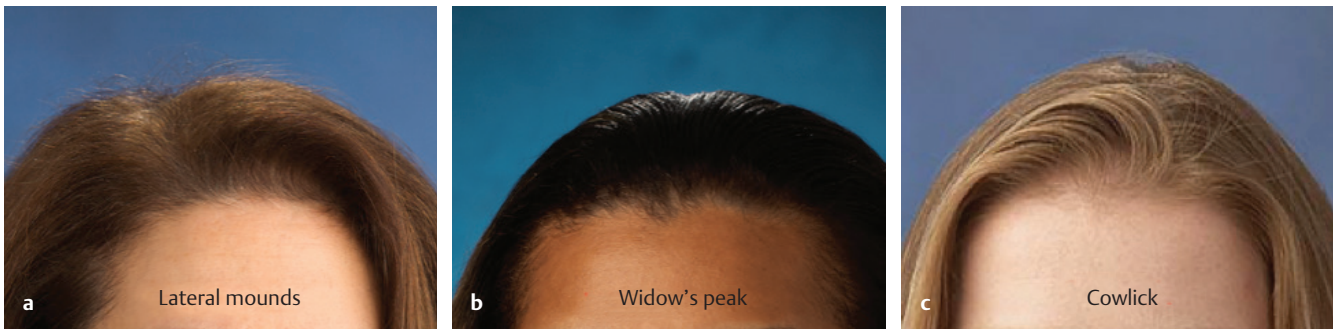
Female-to-male (FTM)	Sideburns Beards Moustache Chest hair Axillary hair
Male-to-female (MTF)	Frontal hairline lowering by transplants or advancement Feminine hairline designs Transplant of areas of baldness from male pattern hair loss (MPHL) Eyebrow augmentation or reshaping



**Fig. 8C.1** Male-to-female hairline landmarks.



**Fig. 8C.2** Creating a female hairline is more than simply advancing the frontotemporal junction.



**Fig. 8C.3** (a) Lateral mounds of a feminine hairline. (b) Widow's peak of a feminine hairline. (c) Cowlick of a feminine hairline.

restoration. One common feature of a female, but not a male, hairline is a convex temporal mound. Another characteristic of women's hairlines is that they are lower than those of men. The midfrontal point of the female hairline is typically 5 to 6 cm above the mid-brow line, whereas this point is usually 7 to 8 cm above the mid-brow line in men. As with females, adding these aspects and other accents such as widow's peaks, cowlicks, and undulations is important in treating MTF transgender patients (**Fig. 8C.3**), but beginners should be cautioned as these are technically difficult. The natural angles and direction of hair emergence must be reproduced for the result to be natural.

All of these features are illustrated in Fig 8B.6.

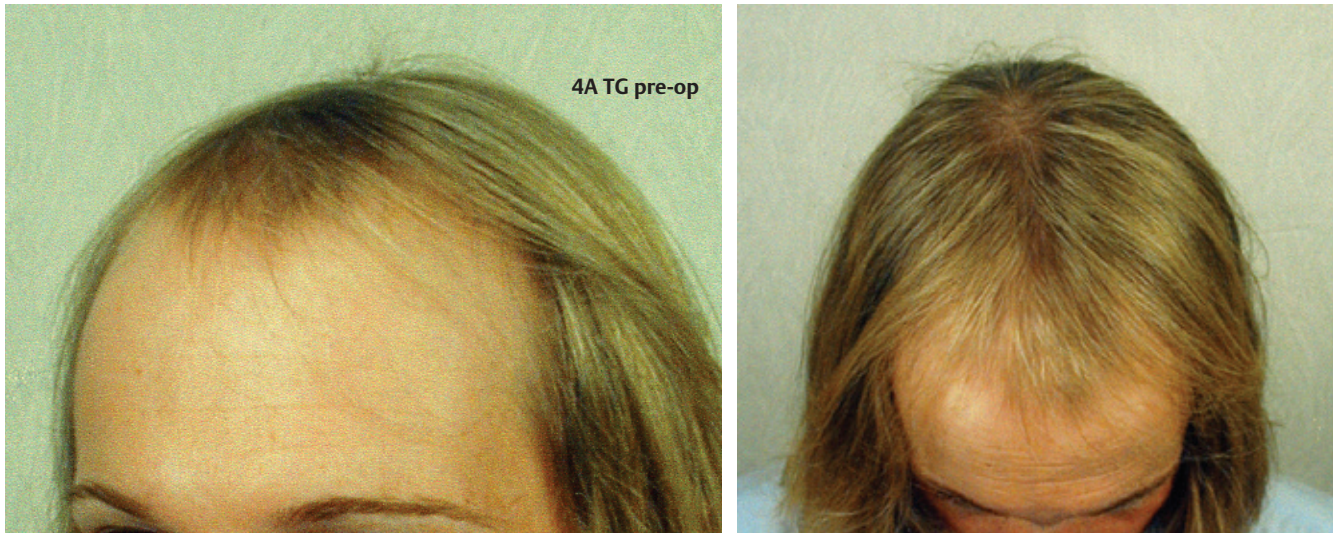
**Fig. 8C.4** is a case of a transgender patient with Norwood stage IV AGA. In creating the hairline design, I first located and marked the frontal origin of the lateral temporal mound or drape superior to the apex of the eyebrow arch (lateral third). This is more medial than in males where we traditionally place the temporal junction

at the lateral canthus. Next the temporal point was placed and marked 1 to 2 cm behind and above the lateral canthus (**Fig. 8C.5**). The landmarks were connected with irregular undulations and temporal convex mounds (**Fig. 8C.6**). When this design was executed, the contribution to feminization of her appearance was significant (**Fig. 8C.7**).

Transgender patients with even minimal stages of AGA require large treatment sessions to create a fully feminizing hairline, typically in the 2,000 to 3,000 graft range. Some may require second treatments for optimal coverage and density.

Female hairline design, hairline advancement surgery can also be an excellent choice for MTF patients with significant frontal hair loss.<sup>4</sup>

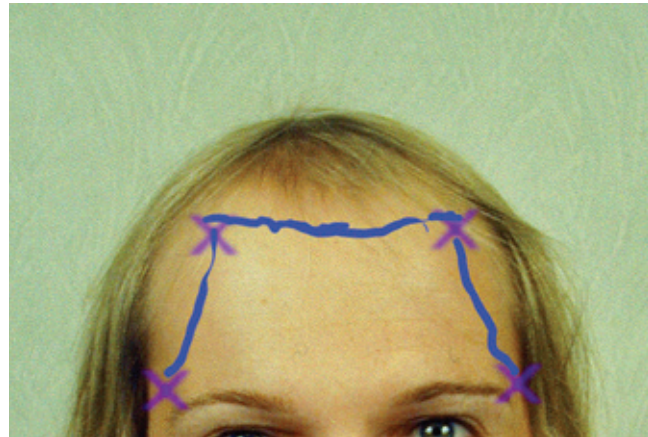
We have to recognize that some patients will have advanced balding when they present for consultation. When performing multiple surgeries and exhausting the safe donor supply, it will not be possible to provide the appearance of full density and a low placed feminine hairline; it is best to advise against hair restoration



**Fig. 8C.4** (a, b) Male-to-female (MTF) transgender patient pre-op with Norwood class IV baldness.



**Fig. 8C.5** In designing her new hairline, landmarks of a female hairline are marked.



**Fig. 8C.6** The design is completed with undulating irregular lines and temporal convexities.



**Fig. 8C.7** (a, b) The resulting transplanted hairline that is feminine in appearance.

surgery. In these cases, the option of using wigs is in the patient's best interest and will be the most satisfying option for her.

## Conclusion

My experience in working with MTF transgender patients has led me to understand that hormone therapy must be initiated as early as possible to arrest AGA. Dutasteride

is the drug of choice. It must be continued even after GCS. FFS should be done before hair transplantation. If AGA has progressed to the point that combined FFS and hair transplantation will not produce a fully feminine hairline, the patient's goal of appearing feminine will be best served through use of hairpieces. The most common error made in treating MTF transgender patients is to use male hairline design concepts. It is essential to use female design concepts.

## Study Questions (MCQs)

**Q1. Which of the following is the most common presentation of a transgender person to a hair transplant practice?**

- A. Beard transplantation.
- B. Eyebrow thickening.
- C. Hairline and scalp transplantation.
- D. Chest hair transplantation.

**Q2. Which of the following are not characteristics of an MTF hairline?**

- A. Widow's peaks.
- B. Rounded concave frontotemporal junctions.
- C. Temporal point 1 cm above and lateral to the lateral canthus.
- D. Undulations.
- E. Cowlicks.

**Q3. What is the desired distance from the midfrontal hairline to the mid-brow line for MTF patients?**

- A. 7 to 8 cm.
- B. 6 to 7 cm.
- C. 5 to 6 cm.
- D. All of the above.

**Q4. Which of the following are components of treating hair loss in transgender patients?**

- A. Hormone replacement therapy.
- B. Dutasteride.
- C. Hairline advancement.
- D. Hair transplantation.
- E. Gender confirmation surgery.
- F. All of the above.
- G. A, B, and D.

**Q5. Which of the following is used to locate the landmark for the medial origin of the lateral mound or drape?**

- A. Mid-pupillary line.
- B. Lateral end of the eyebrow.
- C. The apex of the arch of the eyebrow.
- D. 5 cm from the midfrontal point.

## References

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4. Kabaker S. Transgender hairline restructuring. In: Unger W, Shapiro R, eds. *Hair Transplantation*. New York, NY: Informa; 2011:488–489

## Answer Key

- Q1. C.
- Q2. B.
- Q3. C.
- Q4. F.
- Q5. C.