Skin Disorders in Transgender Patients

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Abbreviations

FTM	Female to male
HIV	Human immunodeficiency virus
HPV	Human papillomavirus
LGBT	Lesbian, gay, bisexual, and transgender
MSM	Man who has sex with man
MTF	Male to female
STI	Sexually transmitted infection
WSW	Woman who has sex with women

Key Points

- Inclusive assistance for transgender persons and training of healthcare workers that will deal with this population are very important.
- More frequent skin disorders in transgender patients are related to hormone therapy and gender affirmation surgeries.
- Xerosis, hair disorders, dermatoses on the neogenitalia, HIV, and STI are important issues in trans women.
- Acne and androgenic alopecia are the most common skin disorders in trans men.
- Hair removal in trans women and mastectomy for trans men are the most desired procedures for gender affirmation for this population.

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Introduction

When we talk about transgender patients, we have to clarify a little bit about some of the terminologies used in scientific and nonscientific literature and also differentiate and clarify certain concepts of the consultation, when mentioning terms such as sex and gender identity. Many healthcare professionals, in most cases, have never had contact with this population, which is currently much more visible and active, although they still face a great prejudice, not only from the general population, but also from the physicians and other healthcare workers, whether by disinformation or religious beliefs. In addition, transgender patients have greater difficulty in accessing healthcare, and we still have few specialized services in Brazil. Nowadays, we have seen a greater number of scientific publications about this theme, but until recently, most of the dermatological conditions that we saw in these patients were only associated with HIV infection, but today, with a greater number of patients having better access to a quality medicine, a range of treatment possibilities for transgender patients

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open up to dermatologists, and most of them are linked to the transition process.

These are some of the terminologies [1, 2] we use in the daily practice, which are important to know when you are dealing with trans population; see Box 55.1.

Box 55.1 Terminology

- Sex: it is the biological: male, female, and intersex.
- Gender identity—it is how a person sees and feels, and is not about the individual's dress, hormone therapy, surgery, or other aspects of the transition.
- Transgender: when the person does not identify with their biological sex, it can be trans woman (from male to female) or trans man (from female to male).
- Cisgender: when the person identifies with his or her biological sex, as opposed to transgender.
- Transsexual: term recently used by some in the medical literature, and they are transgender individuals who have undergone hormonal therapies or surgical interventions.
- Sexual orientation: refers to whom the person is attracted to, e.g., homosexual (gay/lesbian), heterosexual, and bisexual.
- Sexual behavior: about the person's sexual activity with their partners, and may or may not be aligned with sexual orientation, including terms more used by doctors and researchers (for example: man who has sex with man (MSM), woman who has sex with women (MSM)).
- Gender transition/affirmation: the process that the transgender individual goes through when he or she wants to be more aligned with his or her gender identity; it can be clinical (hormone therapy) or surgical.
- Gender affirmation surgery: surgeries practiced to modify the individual's body to be more aligned with their gender identity, for example, vaginoplasty and mastectomy.

Transgender Patient Care

One of the most important things in the care of transgender patients is the inclusive approaching of the patient on consultation, and it is of great importance that everything starts with the training of the healthcare staff. One of the first lessons is the registration of the patient's name; it is desirable we register both names, the legal name and the social name, and always ask which name the patient wants to be called; this option during the care must be the patient's choice and not the doctor's choice, and remember to refer to the patients using the pronouns appropriate to their gender identity. [2] In some states in Brazil, the patient is able to obtain a "social" identity, but which is valid only in his or her state. This social name should be used by the doctor when writing/prescribing a common prescription, but in documents such as special prescriptions, healthcare plans, and exam requests, we must use the legal name.

State of the Art

A large part of the dermatological disorders presented by transgender patients are common dermatoses in the general population, such as eczema, fungal infections, psoriasis, and skin cancer. However, in this chapter, most of the dermatological conditions and treatments that we will address are issues more specifically related to the transition process, such as hormone therapy and gender affirmation surgeries [3].

Disorders and Dermatological Treatments in Trans Women

A transgender woman, male-to-female (MTF) transgender person, or trans woman is someone whose sex assigned at birth was male and identifies as female. Transgender women have many unique dermatologic issues and needs, as literature concerning dermatologic care of transgender women is still scarce.

These demands may be related to patients' practices and habits, use of hormone therapy, sur-

gical and aesthetic procedures which they may undergo, and greater vulnerability to certain diseases, as well as violence and social stigma.

Effects of Hormone Therapy

Hormone therapy has notable effects on skin and hair. Transgender women most commonly take estrogens (mainly ethinylestradiol), often in conjunction with an antiandrogen (i.e., spironolactone or a 5-alpha reductase inhibitor) [4].

Estrogens reduce sebum production. Although no direct association with skin diseases has been reported, dry skin is a possible side effect of the hormone therapy, and women who are already prone to xerosis, such as atopics and the elderly, might complain of pruritus and present eczematous changes. [4] Increased nail fragility has also been reported [5].

Hair Disorders

Androgenetic alopecia can be particularly distressing for transgender women as it may be seen as a sign of a male phenotype. One possible benefit of hormone therapy for male-to-female patients is stabilizing male-pattern hair loss. In some patients, the use of estradiol and antiandrogens may even improve, to some degree, areas already affected by hair thinning [6]. Finasteride and minoxidil may be added to treatment [7].

Although estrogen therapy causes some decrease of facial and body hair, it is usually not enough, and many trans women will still have unwanted facial and body hair. Techniques for removing unwanted hair include electrolysis and laser hair removal [7]. These are among the most sought-after dermatologic procedures by trans women, as it may remove the hair in areas associated with a male phenotype more efficiently and for a long term, and therefore improve gender dysphoria.

The frequent shaving or trimming of facial hair in trans women may lead to pseudofolliculitis barbae, also known as razor bumps [8]. It may affect the bearded area, axilla, pubic region, and legs, primarily in individuals with curled hair. Curled hair can grow back into the skin after being shaved, causing inflammation that presents as itchy erythematous papules and pustules. Post-inflammatory hyperpigmentation or keloid scarring may develop [8].

Gender Reassignment Surgery-Related Issues

Surgical techniques for male-to-female gender reassignment consist mainly of facial feminization surgery, breast augmentation, orchiectomy, and vaginoplasty [9]. The scars resulting from these surgeries may present complications, such as hypertrophy, hyperpigmentation, and keloid formation, and may even aggravate the patient's gender dysphoria. Therefore, prevention and treatment of scars are another frequent issue in this population.

Another aspect regarding bottom surgeries is preoperative hair removal. The use of penile-scrotal skin flaps is the technique of choice for the vaginal lining [9]. The use of hair-bearing flaps in the procedure may result in postoperative intravaginal and intraurethral hair growth. This can result in complications such as infections, calculi, and hairball formation. No method currently exists for postoperative, intravaginal hair removal; therefore, preoperative laser hair removal or electrolysis is recommended to prevent unwanted hair growth [7].

Dermatoses of the Neogenitalia

Dermatologic conditions, such as condyloma acuminata, squamous cell carcinoma, and lichen sclerosus, occurring internally and externally in the neovagina have been reported. HPV-related lesions may present in the neovagina, potentially owing to the high prevalence of human papillomavirus infection with low rates of human papillomavirus vaccination, postoperative complications resulting in chronic inflammation, and new environmental conditions of the neogenitalia.

Cases of neovaginal carcinoma (both HPV and non-HPV) have already been reported [4].

Although there is still no consensus on the need for periodic cytological exams in trans women, regular screening and examination by a dermatologist or gynecologist are recommended.

Treatment of genital lesions may be more difficult because of altered anatomic structures and potential complications that may impair functionality of the neovagina, like stenosis [5].

Complications from Dermal Fillers for Facial/Body Contouring

Due to many reasons such as high cost and limited access, many transgender women seek cosmetic treatments with nonmedical personnel [4]. Injections of illicit filler material by unlicensed professionals may cause many complications, including foreign-body granulomas; bacterial, fungal, or mycobacterial infections; scarring; ulceration and necrosis; gross disfiguration; silicone embolism; and even death [8].

Liquid injectable silicone is commonly used for soft-tissue augmentation. Its popularity is mainly due to the fact that it is permanent and inexpensive [10]. Illicit silicone is sometimes obtained at "pumping parties," where a nonmedical professional injects filler material into areas such as the buttocks, hips, or breasts. Volume of injections may exceed 8 or more liters to obtain a desired feminized body. Often, industrial grade as opposed to medical grade silicone is used. There have been reports of injected material consisting of liquid paraffin, petroleum jelly, lanolin, beeswax, flax oil, linseed oil, olive oil, tire sealant, cement glue, and automobile transmission fluid [11]. Prevalence estimates of unlicensed silicone injections in the MTF population have ranged from 25% to 32% in the United States [8].

Chronic cellulitis, subcutaneous nodules and plaques, and foreign-body reactions may develop even many years after injection. Other side effects include erythema, edema, indurations, pain, hyperpigmentation, and unevenness. A large volume of injection causes the silicone to migrate, and therefore nodules and granulomas may be seen at a distant location from the site of injection. Mycobacterium infection has been reported after injection of adulterated liquid silicone. Additionally, bacteria can form a biofilm around foreign materials. Deep fungal infections have also been reported after silicone injection [10]. Therefore, physicians must not only make sure that transgender patients have access to more safe alternatives, but also be prepared to manage these complications.

HIV, Sexually Transmitted Diseases, and Other Health Disparities

Transgender individuals experience higher rates of HIV and sexually transmitted infections, violence and social stigma, and mental health issues [2].

Transgender women are at risk for HIV and STI and should receive screening and prevention strategies [12]. It has been estimated that 28% of transgender women overall, and 56% of black transgender women, tested HIV positive in the United States in 1990–2003 [13]. For transgender women sex workers, HIV prevalence is even greater [12].

Sexually transmitted infections, including syphilis, gonorrhea, and chlamydia, have been associated with increased risk of HIV acquisition. However, there is little information on the rates of STI in trans women. Some studies have found high incidence of rectal chlamydia and gonorrhea and of current or past syphilis. There is one case report published of gonorrhea in a neovagina. Urgent research is needed to further investigate the rates of STI in different anatomical sites for trans women, in order to provide guidance on testing intervals, sites of testing, and appropriate methods of sampling to detect STI in this population [12].

Some psychiatric disorders and psychosocial conditions, including depression, anxiety, suicidal ideation, and substance abuse, are highly prevalent within transgender populations. Transgender women also have decreased access to healthcare and regularly face gender-based discrimination and violence. There are many barriers to healthcare including lack of providers who are sufficiently knowledgeable about transgender healthcare, financial barriers, discrimination, and health system barriers. Social stigma and discrimination are also important social determinants of health [12]. Taken together, these

factors not only contribute to HIV and STI vulnerabilities, but may also be associated with worsening of some dermatoses known to be influenced by psychological factors, such as psoriasis, vitiligo, and autoimmune diseases.

Disorders and Dermatological Treatments in Trans Men

A transgender man, female-to-male (FTM) transgender person, or trans man is someone whose sex assigned at birth was female and identifies as male. Main dermatological conditions in trans men are related to the use of testosterone in hormone therapy in the treatment of gender affirmation [3], which are acne and alopecia, and that occur more frequently in these patients when compared to cisgender men [14, 15].

Acne

Testosterone can be used intramuscularly or transdermally, and its prolonged use increases sebum production by the sebaceous glands, leading to the appearance of acne in 88% to 94% of patients, and acne lesions are usually located mainly on the back, face, and chest and may vary in degrees of severity [4, 15–17].

Acne treatment in trans men is similar to the acne treatment in the general population; in mild cases, patients respond well to topical retinoids and systemic antibiotic therapy, but in more severe cases, it is necessary to use oral isotretinoin. In these cases, we need some serious ethical and medical considerations as well [13].

The creation of the new genitalia is not a priority for trans patients, so we have to emphasize that most of the trans men would not have done hysterectomy and/or phalloplasty, maintaining the entire female reproductive system, keeping the possibility of becoming pregnant, even when using testosterone treatment [4]. This has to be considered when offering isotretinoin treatment and kindly discussed with the patient, especially in terms of contraceptive use, as this may affect the treatment of gender affirmation process. Some doctors tend to assume that a trans man would have a relationship with a cisgender woman, but it should be noted that gender identity is not necessarily related to the sexual orientation of the trans patient [3]. The major ethical problem in prescribing isotretinoin for trans men is that, in Brazil, the isotretinoin prescription formularies are divided into two forms: one is "men and women over 55 years of age," and the other is "female sex patients under 55 years of age." In these cases, we must consider the patient's biological sex, do all necessary pre-prescription exams including beta-HCG, prescribe by legal name, and openly talk to the patient about their sexual orientation, the possibility of pregnancy during the treatment, and which contraceptive method will be used by the patient.

Androgenic Alopecia

Testosterone hormone therapy is the first treatment step in the masculinization of the trans patient [18], leading to redistribution of body fat, increased muscle mass, cessation of menstruation, change of voice, and increased facial and body hair, making the patient more aligned with their gender identity, but its prolonged use can lead to the appearance of androgenetic alopecia [19]. Some trans men like this effect, as they consider it a masculine characteristic, but for others, it is an undesirable adverse effect [13]. In these cases, we can consider topical treatment with 5-alpha reductase inhibitors or minoxidil, which do not block the androgenic effects of testosterone; in the most severe cases, the use of oral medication such as finasteride may be considered, but the ideal method is to delay its use as long as possible and just start after all the desired sexual characteristics have been developed [13].

Gender Reassignment Surgery-Related Issues

The most desired gender-affirming surgery for the trans man is mastectomy [20], but this procedure can lead to the formation of unaesthetic scars and/or keloids that can be treated with

intralesional infiltration of triamcinolone, laser, and microneedling. Some patients, before they are able to perform this surgery, try to hide their breasts, by flattening them and using chest-compressive banding [21], and this can result in some local skin disorders such as skin ulcerations, contact dermatitis, acne, miliaria, and fungal infections.

Some dermatological procedures, commonly used in medical cosmiatry, can help in the gender-affirming process of these patients, such as botulinum toxin and fillers. The botulinum toxin can be used to flat the eyebrows giving a more masculine aspect to the patient. The fillers, mainly based on hyaluronic acid, can help in flattening the frontal region, widening the chin, defining the angle of the jaw, balancing the upper and lower third of the face, and this way complementing the masculinization of the patient face [14].

Perspectives

Despite advances in technical and scientific knowledge and the greater number of health professionals being involved in assisting transgender patients, we still have a lot to learn. In Brazil, until recently, transgender patients with HIV were considered MSM, and thus they were not even recognized, but step-by-step, we are seeing an increase in the number of scientific publications on the subject and places for more specialized treatment.

For us dermatologists, it is a new world that is opening, which depends on us to offer approved health products and quality medical technologies, preventing patients from being treated by curious and nonmedical personnel, reducing the possibility of adverse effects, by the use of illegal materials or products without a medical degree.

The fact that nowadays this subject is discussed in the medical field is already a great advance, and regardless of opinion, concepts, and religious beliefs, we hope that these considerations will be treated, in all its aspects, as a public health issue.

Glossary

Biofilm Collection of one or more microorganisms that can grow on different surfaces.

FTM trans person Transgender who did the transition process from female to male.

Gender dysphoria Distress experienced by some people whose gender identity does not correspond with their sex assigned at birth.

HIV Human immunodeficiency virus.

HPV Human papillomavirus.

Intersex Persons who are with external or internal genitalia that vary from typical male or female genitalia, or a chromosomal pattern that varies from XX (female) or XY (male).

MTF trans person transgender who did the transition process from male to female.

STI Sexually transmitted infection.

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