

Original article

## Characterization of a Population of Adult Patients with Gender Dysphoria in San José Hospital, Bogotá (Colombia)

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### Abstract

**Purpose:** At the global level, there is an increase in the incidence of gender dysphoria, and in Colombia there is no information on the general characteristics of transgender patients. The objective was to characterize the population of patients with gender dysphoria in Hospital San José de Bogotá between February 2011 and September 2017.

**Methods:** Case series study; Clinical records of patients older than 18 years with gender dysphoria who had attended an endocrinology consultation were reviewed. We collected demographic variables, physical and biochemical changes with therapy, affirmation procedures, and complications, to evaluate the completion of the objective of physical and biochemical changes in 2 periods (at 3 months/>12 months) through anamnesis, and physical and paraclinical exams. A descriptive analysis of the information was carried out.

**Results:** Forty-two patients were included, 57% being trans women, and 43% being trans men. There was an increase in patients consulting over time, a predominance of transgender women, and a high rate of medical transition with hormones that affirm gender without prescription or medical supervision (57.1%). The biochemical goal was the following: group of transgender women total with testosterone levels of <50 ng/dl with estradiol 100–200 pg/ml, and for the group of transgender men estradiol level of <50 pg/ml with total testosterone between 350–700 ng/dl. Physical and biochemical changes were achieved earlier in transgender men. After a one-year follow-up, >50% of both groups fulfilled biochemical goals and had initiated physical changes. Gender affirming surgery were performed in 3 transgender men and 4 transgender women. The median follow-up time was 13 months, without serious complications.

**Conclusion:** Our series correlate with the world's literature on an increase in patients with gender dysphoria, even though their diagnosis is still late. There is a predominance in the MtF group, as well as a high rate of medical transition with hormones that affirm gender without medical supervision. In our current setting, there are still great limitations due to the presence of human, social and knowledge barriers. The results will favor future investigations that strengthen the care of patients with gender dysphoria in our context.

**Keywords:** Gender Dysphoria, Transgender, gender transition.

### Highlights

- In Colombia, there is an increase in the diagnosis of gender dysphoria. However, it continues to be late.
- There is a high proportion of patients who practice self-hormonization
- The success of gender reassignment depends on the interaction with an interdisciplinary team of professionals.
- In our environment, comprehensive management is still limited by numerous human, social and comprehension barriers. Reasons why more research is crucial in this field.

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# Caracterización de una población de pacientes adultos con disforia de género en el Hospital San José, Bogotá (Colombia)

## Resumen

**Objetivo:** a nivel mundial existe un aumento en la incidencia de disforia de género, y en Colombia no existe información sobre las características generales de los pacientes transgénero. El objetivo fue caracterizar la población de pacientes con disforia de género en el Hospital San José de Bogotá entre febrero de 2011 y septiembre de 2017.

**Métodos:** estudio de serie de casos. Se revisaron las historias clínicas de pacientes mayores de 18 años con disforia de género que acudieron a una consulta de endocrinología. Recolectamos variables demográficas, cambios físicos y bioquímicos con la terapia, procedimientos de afirmación y complicaciones. Se evaluó el cumplimiento del objetivo de cambios físicos y bioquímicos en 2 periodos (a los 3 meses/ > 12 meses) a través de anamnesis, examen físico y paraclínicos. Se realizó un análisis descriptivo de la información.

**Resultados:** se incluyeron 42 pacientes, el 57 % fueron mujeres trans y el 43 % hombres. Se encontraron un aumento de pacientes que consultan a lo largo del tiempo, un predominio de mujeres transgénero y un alto índice de transición médica con hormonas que afirman género sin prescripción ni supervisión médica (57,1 %). Se definió la meta bioquímica de la siguiente manera: grupo de mujeres transgénero niveles de testosterona total < 50 ng/dl con estradiol 100–200 pg/ml y para el grupo de hombres transgénero nivel de estradiol < 50 pg/ml con testosterona total entre 350–700 ng/dl. Los cambios físicos y bioquímicos se lograron antes en los hombres transgénero. Al año de seguimiento > 50 % de ambos grupos cumplieron con los objetivos bioquímicos y habían iniciado cambios físicos. La cirugía de afirmación de género se realizó en 3 hombres transgénero y 4 mujeres transgénero. La mediana de tiempo de seguimiento fue de 13 meses, sin complicaciones graves.

**Conclusión:** nuestra serie se correlaciona con la literatura mundial con un aumento de pacientes con disforia de género, aunque el diagnóstico aún es tardío. Predomina el grupo MtF y una alta tasa de transición médica con hormonas que afirman el género sin supervisión médica. En nuestro entorno existen todavía grandes limitaciones por la presencia de barreras humanas, sociales y de conocimiento. Los resultados favorecerán futuras investigaciones que fortalezcan la atención a pacientes con disforia de género en nuestro contexto.

**Palabras clave:** disforia de género, transgénero, transición de género.

## Destacados

- En Colombia existe incremento en el diagnóstico de disforia de género, aunque este continúa siendo tardío.
- Existe alta proporción de pacientes que reciben autohormonización.
- El éxito de la reasignación de género depende de la interacción de un equipo interdisciplinario.
- En nuestro medio el manejo integral aún es limitado por la presencia de barreras humanas, sociales y del conocimiento; se requiere más investigación en este campo.

## Introduction

Despite having been published 35 years ago, the first gender dysphoria diagnostic guide in 1979 (1) continues to be an entity with large gaps to explore. One example is its pathophysiological component, which has not been clarified yet (2).

Gender dysphoria or transgenderism refers to the condition in which a person experiences incongruence between their gender identity and the biological sex designated at birth, leading them to persistent discomfort with the expected social role and functional deterioration in different areas of daily life (3). Similarly, the term non-binary refers to those people whose identity does

not correspond exclusively to male or female and can vary between people who experience both male and female identity at different times or some who do not wish to have one specific gender identity (4).

In adults, it is defined by the criteria included in the DSM-V manual, and it is essential that the diagnosis is carried out by a psychiatrist or professional with training in this field (5, 6). Even in other countries like the United States, they can be diagnosed by a psychologist, primary care providers/family medicine providers trained in these areas. Patients may be categorized into three groups: transgender women or trans woman/feminine (change from man to woman: MtF/

male to female), transgender men or trans man/masculine (change from woman to man: FtM/female to male) and non-binary (individuals who do not identify as exclusively male/masculine or female/feminine) (3, 4, 7).

Once the diagnosis is confirmed, the process of gender affirming therapies can be initiated ideally in a center that has multidisciplinary care and management experience (5, 7), to make a transition to the gender in-line with patient's identity and clinical and biochemical goals. The steps include ongoing support therapy by psychiatry, use of hormone therapy and, in some cases, gender affirming surgery (5). Nevertheless, these are not always completed since some patients only want counseling and accompaniment from a psychiatrist.

For hormonal therapy, different schemes are used (dose, administration and periodicity). These are chosen according to the individual characteristics and preferences of the patients' testosterone (FtM) and estrogens (in association or not with antiandrogenic agents), (MtF) being the most used medications. Periodic follow-up sessions include anamnesis, exploration of physical signs of virilization/feminization, serum hormone levels and surveillance of complications associated with hormone administration (5, 7-10).

However, the use of said hormonal therapies for medical transition is not innocuous and may constitute a risk factor for the development of some complications such as hypertension, thromboembolic disease, dyslipidemia, osteoporosis after gonadectomy, among others (5, 10).

Regarding the prevalence of gender dysphoria, data varies (changes in the definition and criteria of diagnosis varies over time). Information is limited to people who attend health services and the country of publication of the study —there are more transgender people in "trans-friendly" countries— (11, 12). However, among the different studies available, there is a systematic review and meta-analysis of observational studies conducted between 1945 and 2014. Out of the compiled studies, 85.7% were conducted in Europe and none in Latin America. There was

a global prevalence of 4.6 in 100,000 individuals found, 6.8 and 2.6 for transgender women and men, respectively (12). The analysis reported an increase in prevalence over time, in the sex ratio for transgender women and in access to health services for these patients (12, 13).

Although globalization and cultural exchange have allowed a shift in perception and social acceptance of patients with gender dysphoria in Colombia, there are still many barriers in terms of access to medical services (14, 15), as well as cultural and social obstacles which reinforce their personal and psychological discomfort and makes this population especially vulnerable.

In Colombia, there is a model designed to mitigate these barriers. It involves the general health system considering priority over time, the opportunity for patients to be assessed, and comprehensive coverage for the adequate care of transgender patients. This model also implies the individual assessment at Hospital San José by a multidisciplinary group composed of psychiatrists, urologists, gynecologists, endocrinologists, and plastic surgeons. Different medical specializations contribute to facilitate and speed up the care processes, as well as support the decision-making process. Once patients have begun their affirmation process and if required, these patients can be assessed by the medical board (meeting by the multidisciplinary group) to make essential decisions about the patients' case.

The increase in patients with gender dysphoria in the country, the absence of Colombian publications on the subject, and the complexity and need for a multidisciplinary approach means that it is rather critical to know the state of our population. Therefore, we decided to characterize the population of patients older than 18 with diagnosis of gender dysphoria who attended the outpatient clinic of endocrinology at the Hospital San José de Bogotá between February 1, 2011, and September 30, 2017.

## Methods

A descriptive case series study was conducted in the San José Hospital of Bogotá, where we reviewed retrospectively the clinical histories

of the patients who attended the outpatient endocrinology service in the period between February 1, 2011, and September 30, 2017.

Inclusion criteria consisted of being at least 18 years of age and having a diagnosis of gender dysphoria confirmed by psychiatry according to the current DSM criteria. Patients in pregnancy were excluded from the study as were those for whom there was >50% loss of information in the clinical histories about the variables. For the evaluation of the physical and biochemical changes obtained with hormonal therapy, we included only the data of patients who had attended the consultation more than once in the analysis and who had this complete information (physical and/or biochemical changes) in each group (FtM and MtF) according to the period evaluated (after 3 months and > 12 months).

Demographic, clinical and paraclinical variables were taken to extract the necessary data. It included, among others, the age at onset of symptoms, date of diagnosis by psychiatry, time from onset of symptoms to diagnosis, hormone therapy that affirm gender without prescription or medical supervision (self-administration of hormones by patients), type of therapy and time of use prior to admission to the San José Hospital. Criteria such as physical and biochemical changes achieved with hormone therapy, carrying out of gender reassignment surgery and complications derived from medical therapy were also considered.

The physical and biochemical changes were evaluated in two moments: at 3 months and after 12 months of initiating hormone therapy (initiated at the San José Hospital or hormone therapy that affirm gender without prescription or medical supervision prior to admission to the institution). The objective of the therapy was evaluated at the end of each period (after 3m and > 12m), obtaining the information of the physical changes through anamnesis and physical examination. Biochemical results were obtained through measurement of testosterone and estrogen levels for the following treatment goal: group of transgender women total testosterone levels < 50 ng/dl and serum estradiol in normal physiological range of cis-women between 100–200 pg/ml and for the group of

transgender men estradiol level <50 pg/ml with total testosterone within the physiological range corresponding to cis-men between 350–700 ng/dl, measured just before the next injection; these in accordance with the recommendations suggested by the clinical practice guidelines of the endocrine society (5, 16).

Regarding the complications associated with hormonal therapy, the following parameters were taken into account: dyslipidemia was defined as total cholesterol >200 mg/dl, high-density cholesterol (HDL-c) <40 mg/dl, low-density cholesterol (LDL-c) >130 mg/dl, triglycerides (TAG) >150 mg/dl; hyperprolactinemia in those patients with prolactin values >25 ng/ml; erythrocytosis if there was a hematocrit value >50% or hemoglobin >18 gr/dl; hepatic dysfunction if there was elevation equal to or greater than 3 times the upper limit of the normal range of alanine aminotransferase (ALT) or aspartate aminotransferase (AST).

A descriptive analysis of the information was carried out. The quantitative variables were evaluated with measures of central tendency and dispersion according to the distribution of the data. The categorical variables were described as absolute and relative frequencies. The data analysis was performed with the statistical software Stata 13.

This work was approved by the Hospital San José Committee of Ethics in Research with Human Beings, Act No. 15 of August 23, 2017, and by the Research Committee of the Fundación Universitaria de Ciencias de la Salud (Health Sciences University Foundation, FUCS for its Spanish initials). All the information was collected and analyzed anonymously to respect the confidentiality of the patients.

## Results

### Demographic characteristics

A total of 57 clinical records of patients were reviewed during the study period; fifteen were excluded for not meeting eligibility criteria. For the demographic analysis, a total of 42 patients with a median age of 27 years (IQR 22–33) were included. The ratio between transgender

women/transgender men was 1.3:1. In 71.4% of the patients (30), the median age of onset of symptoms was 6.5 years old (IQR: 4–12) and the median time from the onset of symptoms to the diagnosis by a psychiatrist was 15 years (IQR: 12–23). Table 1 summarizes the main characteristics.

Over time, an increase in the number of patients admitted for the first time to assessment in the Department of Endocrinology was found. In the year 2011 only one patient was registered, and by September 30, 2017, 18 new patients had attended consultations.

**Table 1.** Population characteristics

Variable	RESULT
Initial Gender Man n (%)	24 (57%)
Initial Gender Woman n (%)	18 (43%)
Age (years)	27 (22–33)
Weight (Kg)	63.5 (60–72)
Size (m)	1.66 (1.62–1.71)
BMI (Kg/m <sup>2</sup> )	24.3 (20.2–25.6)
Systolic blood pressure (mmHg)	114.5 (90–150)
Diastolic blood pressure (mmHg)	69.9 (60–85)
Time since beginning of symptoms until consultation (years)	15 (12–23)
Age of beginning of symptoms (years)	6.5 (4–12)
Experience in real life >3 months (%)	100%
Self-hormonization global n (%)	24 (57.1%)
Self-hormonization WM n (%)	8/18 (44.4%)
Self-hormonization MW n (%)	16/24 (66.6%)

**Source:** The authors

Self-administration of hormones before consulting at San José Hospital for the first time was higher in the group of transgender women, 66.6% more than in transgender men, with a median time of therapy for 18.5 months (IQR: 11.5–24) and 14.5 months (IQR: 3–24) for MtF and FtM respectively. In general, different estrogen and progestin (oral and injected) regimens were used at doses higher than usual and, in some cases, with simultaneous combination of more than one estrogenic preparation. However, the use of

testosterone enanthate for the FtM group was generalized at a usual dose.

Half of the patients presented one or several comorbidities (44 events); 15 had some comorbidity of smoking (71.4%), 7 had illicit drugs or alcohol use (previous or current) (33.3%), and 5 had anxiety disorder or depressive disorder (23.8%), these being the most frequent. Two trans women had the HIV infection with optimal immunologic and virologic control at the time of assessment. Finally, there were isolated cases of

patients with chronic hepatitis B, treated syphilis, asthma, urolithiasis, psoriasis and hemorrhagic cystitis, all of which were controlled.

### Biochemical and physical changes with hormone therapy group MtF

Feminization therapy was mainly performed with conjugated estrogens in 16 of 21 patients with a variable dose of 0.625 to 1.875mg/day; a dose of 1.25mg being the most used (10 patients). Other preparations were estradiol valerate, ethinylestradiol (1 patient) and the transdermal patch; as antiandrogenic therapy, spironolactone was prescribed in all cases at doses between 100 – 300 mg day. The median follow-up time at the Hospital San José was 12 months (RIC: 7–23), among which 17/21 patients had 24 months or less of treatment.

In terms of achievement of the biochemical objective, it was observed that the level of

estradiol >50pg/ml after 3 months of therapy had been achieved in 1 of 8 patients (12.5%) and after 12 months in 8 of 15 patients (53.3%). Likewise, the goal of total testosterone <0.55 ng/ml after 3 months was not met by any of the 11 patients, although after 12 months it was met in 5 of 15 patients (33.3%).

The physical changes of feminization were self-reported and objectively verified by the treating physician at each follow-up visit. These changes started from the first 3 months. Out of the 9 parameters explored, the ones more frequently perceived in more than 50% of the patients were the diminishing in body hair (64.3%), facial hair (58.8%), and breast growth (71.4%). These changes continued in evolution one year into hormonal therapy and all the evaluation parameters were obtained in at least half of the patients (Table 2).

**Table 2.** Physical changes of feminization

Physical changes	<3 months (14 patients)	>12 months (13 patients) *
Decreased body hair	64.3%	84.6%
Soft skin	50%	100%
Decreased facial hair	58.8%	84.6%
Decreased muscle mass	0%	53.8%
Redistributed body fat	21.4%	76.9%
Decreased libido	35.7%	84.6%
Decreased spontaneous erections	35.7%	92.3%
Increased breast size	71.4%	100%
Decreased testicular size	7.1%	69.2%

\*One patient has not completed the 12 months of treatment

**Source:** The authors

### Biochemical and physical changes with hormone therapy group FtM

For the transition in transgender men, testosterone enanthate was used at a monthly dose of 250 mg in 11 patients and a 1000 mg of testosterone undecanoate quarterly in five of them. No patients were recorded with testosterone gel. In this group, the median time of institutional treatment was 8.5 months (IQR: 3–17.5), this being equal to or less than a period of 2 years in 14 of 16 patients.

The biochemical goal of estradiol suppression (<50 pg/ml after 3 months) was reached in 50% of patients (1 of 2 patients) and the total testosterone goal (>350 ng/dl) was achieved by 75% of patients (3 of 4 patients). However, after one year of

therapy, 66.6% (2 of 3 patients) obtained estradiol <50 pg/ml and 80% (4 of 5 patients) a total testosterone level of >350 – 700 ng/dl.

Regarding the assessment of the physical changes acquired with hormonal therapy, 11 characteristics were closely observed, finding that those that appeared most frequently in the first 3 months were amenorrhea, deepening of the voice and an increase of facial and body hair. After more than one year of treatment, this perception about gaining secondary male characteristics was present in more than 80% of the patients for 9 of the 11 parameters, with the less frequent being acne and vaginal atrophy (Table 3). These changes were self-reported and objectively verified by the treating physician at each follow-up visit.

**Table 3.** Physical changes of masculinization

Physical changes	<3 months (7 patients)	>12 months (7 patients)
Increased body hair	85.7%	100%
Acne	28.5%	28.5%
Increased facial hair	57.1%	100%
Increased muscle mass	28.6%	85.7%
Redistribution of body fat	28.6%	85.7%
Amenorrhea	85.7%	100%
Cliteromegaly	57.1%	100%
Deepening of voice	85.7%	85.7%
Decreased breast size	0%	85.7%
Vaginal atrophy	14.3%	28.6%
Increased libido	28.6%	85.7%

Source: The authors

### Complications

24.3% (9 of 37 patients) experienced some complication associated with the hormonal preparations administered: 2 cases of acne, 3

of erythrocytosis and 4 of dyslipidemia, all of them corrected. However, no cardiovascular, thromboembolic or oncological events were recorded at the final follow-up date.

## Gender affirmation surgery

In total, procedures were performed in 12 of 42 patients, 9 of 24 patients (37.5%) in the MtF group and 3 of 18 patients in the FtM group (17%). In the FtM patients, mastectomy was performed in all 3 cases (17%). In patients with MtF, the following gender-reassignment surgeries were performed in 2 patients (8.3%): gonadectomy, penectomy and creation of the neovagina, as well as augmentation mammoplasty in 2 patients (8.3%). Another gender affirmation therapy used was the laser for facial hair removal to improve the appearance of the skin. It was performed in 6 patients (25%); none of the trans women patients received speech and voice training.

## Discussion

This series of cases summarizes the main characteristics of a group of 42 patients with gender dysphoria and constitutes the first study of this type carried out in Colombia. In our country there is no information about the incidence, prevalence and treatment units for patients with gender dysphoria; however, the number of transgender patients attended is increasing globally in new epidemiological studies (12). There is more knowledge about social stigma, the condition of discrimination and, in some cases, the abuse and violence that these patients face, all of which lead to situations of risk and marginalization and even to encountering barriers to accessing timely and adequate medical attention (17).

These barriers also appear because of the lack of medical personnel with sufficient knowledge for the care of patients with gender dysphoria. However, our country is not the only one to present said lack of knowledge and trained personnel, as it is evidenced by the findings made in the study carried out in the U.S. in 2016 by Irwig M. (18). By applying an anonymous survey to 80 participants (61 endocrinologists, 13 endocrinology fellows, 2 pediatric endocrinologists and 4 nurses), Irwig found that 63% of endocrinologists were willing to provide transgender care. However, the majority (59%) did not have these patients in their office. Interestingly, only 20% of them felt "very comfortable" when discussing the gender identity

and/or sexual orientation of a patient, and 33% of respondents did not feel competent to provide this type of care.

In Colombia, this panorama does not look more favorable. In 2011, as part of its public policy for the full guarantee of rights of LGBTI sectors, the Office of the Mayor of Bogotá showed that 54.4% of people with gender dysphoria had perceived their right to health as violated, and 43.84% were denied medical attention when they required it (14, 15). This fact seems to correlate with the delay between the onset time of symptoms and diagnosis of 15 years (median) found in this series. The same evaluation was carried out again by the Office of the Mayor of Bogotá in 2014, showing a discrete improvement in the perception of violated right to health at 45.8% (19), a figure that continues to be high.

In our population, the gender ratio (1.3:1) was slightly predominant for transgender women comparable to other European studies, such as the De Cuyper study (20), which indicates a gender ratio of 2:4:1 in Belgium for 2007. Nonetheless, it was lower than the statistical data of 6:1 from previous decades mentioned by Benjamin H. in 1999 (21). It even reflects a trend towards inversion in this distribution to a greater number of transgender men, as was observed in a study from 2015 (13), which evaluated the proportion of trans women and trans men in adolescents with gender dysphoria in Toronto and Amsterdam in two periods of time 1999 – 2005 and 2006 – 2013.

The sample of patients included a high percentage of patients with medical transition with hormones that affirm gender without prescription or medical supervision (self-administration of hormones) (57.1%) being 66.6% and 44.4% for the MtF and FtM groups, respectively. These results are well above the general average reported in the literature that ranges between 7.8% (0% FtM and 19% MtF) (22) and 23% (6% FtM and 32% MtF) (23). They more closely resemble a study published in Thailand with 88.6% self-administration of hormones (24). Additionally, the simultaneous use of combination therapies with either 2 or more types of estrogen, estrogen and progestin or more than one type of estrogen and progestogen



was common in our patients. This tendency is not recommended as has been mentioned in previous studies (25). It is possible that these high rates of hormones self-administration are a reflection of the difficulties and/or fear on the part of patients to get comprehensive medical care, as suggested by Haan G. in a study of 314 transgender women in San Francisco in 2010 (26).

On the other hand, it is known that, from an early age, people with gender dysphoria have a higher prevalence of a wide spectrum of mental health alterations when compared to the general population (27). A significant finding in our series was the coexistence of some psychiatric disorder in 12.8% of patients, a fact that could be associated with negative experiences derived from discomfort due to gender incongruence, social and personal difficulties related to the condition, or fear of discrimination that, in some cases, also leads to late consultation (28).

Regarding the hormonal therapy used in transgender women, different types of estrogen and spironolactone were prescribed at appropriate doses to achieve the treatment goals (5). Most patients received conjugated estrogens, which was the therapy available in the Colombian health system in previous years. Nevertheless, with the inclusion of other types of estrogens in the health system, the current tendency is towards the widespread use of estradiol valerate. Although conjugated estrogen therapy can be used in these patients with no difference in the final gain of female secondary traits (9), it may be preferable to use other estrogenic therapies such as estradiol valerate (17- $\beta$ -estradiol) to guarantee a better biochemical monitoring (7, 9). It is also recommended to reject the use of ethinylestradiol and to prefer transdermal patches in a population older than 40 years or with other factors that increase the risk of thromboembolic events (5, 29). Similarly, in the MtF patient group, no progestogens were used in any case, due to the controversy over their benefit in breast development and the risk of breast cancer and cardiovascular events (10).

Although the time of follow-up of our patients still does not allow to evaluate the final development of the physical changes, it was

possible to verify that the temporality of the appearance of female secondary features was correlated with the literature in which the increase of the breast tissue and the reduction of body and facial hair are the most frequently observed changes in the first 3 months of hormonal treatment (5, 7, 30).

Even though there are oral, topical, subcutaneous and nasal routes of testosterone administration, transgender men are traditionally treated with parenteral testosterone (7). The results found in the 18 FtM patients treated in our center were similar; although the follow-up time was also short, the evaluation of physical changes allowed corroborating that the increase of facial hair and amenorrhea are the changes that occur earlier (5, 8, 30).

This study revealed a low rate of complications related to hormonal therapy. Patients with acne were treated in the Department of Dermatology and those with dyslipidemia received conventional treatment. Although there were 3 cases of erythrocytosis in the FtM group, this alteration was corrected with the change in the periodicity of testosterone application. As reported by Pelusi C. *et al* (31) in a follow-up study after 12 months of treatment with 3 types of testosterone (enanthate, undecanoate and testosterone gel) these therapies were effective and safe. At the end of the observation period there was no registry of deaths, or cardiovascular, thromboembolic or oncological events attributed to the therapy. However, the probability of developing these events usually occurs in patients with longer periods of treatment (10 – 18.5 years) (10).

The number of patients undergoing gender reassignment surgery was scarce. However, this correlates with the short follow-up time patients have in the hospital and is in accordance with the recommendations of the international guidelines to perform these definitive treatments once the patient has completed at least 12 months of hormonal therapy and real-life experience assuming their new role (5, 7).

This study presents the results on the main clinical and demographic characteristics of patients with gender dysphoria treated in the San José de Bogotá hospital by the multidisciplinary

care group. It also addresses the experience gained with the use of different therapies during the process of gender affirmation, as well as physical and biochemical changes, and some aspects of safety with their use. The publication of these results will serve as an illustration of the processes that are currently carried out in a local hospital for the care of patients with dysphoria, in addition the dissemination of this information to the medical community (not only endocrinologists), to raise awareness and guide the timely approach to managing this group of patients (delays in care in years). Finally, our research has also shown that the number of patients who decide to consult is also increasing in our country. Despite this, our study lacks vital information related to other processes of gender affirmation, such as patient satisfaction, collaboration among team members, effectiveness in the care model and reduction of care barriers.

We found several limitations in the development of this work. One is related to the loss of information on biochemical variables of control goals achieved with harmonization. In some cases, this is due to administrative difficulties to obtain the complete collection of paraclinical exams indicated in each medical control; in other cases, to non-compliance by patients to scheduled appointments. There was also some incomplete data about some of the physical changes developed with hormonal therapy, a situation that could be attributed to problems with filling out the medical history in a consistent manner at each follow-up visit. Another important aspect was the short follow-up period of approximately 12 months, which did not allow for a full evaluation of the final objectives of the gender reassignment process or the appearance of long-term complications in both FtM and MtF groups.

A large part of the patients residing in the outskirts of Bogota are referred to centers of excellence currently active in Bogota. However, in other cities of the country, multidisciplinary groups are being formed for the comprehensive management of these patients. Another important limitation of this study has to do with the fact that the results of this study represent patients from a single tertiary care hospital in Bogotá. The care

provided to transgender patients in other facilities and regions of Colombia may be different.

## Conclusion

Finally, the results of our series correlate with the world literature with an increase in patients with gender dysphoria. Although the diagnosis is still late, a predominance is maintained in the FtM group and a high rate of medical transition with hormones that affirm gender without prescription or medical supervision. With supervised hormonal therapy, physical and biochemical changes are achieved at 3 months in a manner similar to the one reported in other populations.

Although the success of the reassignment depends on the interaction of an interdisciplinary team, in our current setting there are still great limitations due to the presence of human, social and knowledge barriers. This description will serve as a starting point for future research that strengthens the care of patients with gender dysphoria in our context, considering that there are no similar studies published in Colombia to date.

## Conflicts of interest

The authors declare that they have no conflict of interest.

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