Becoming a Woman: When and Why Gender Dysphoria May Challenge the Basic Steps of Women's Sexual Identity

5

Alessandra Graziottin

5.1 Introduction

Becoming a woman is a long path. It starts even before conception, when dreaming about the child to come is shaped by parent's expectations, fantasies, needs and desires. It is shaped during the prenatal life, first of all by chromosomic, genetic and endocrine factors, modulated by complex – and yet little understood – metabolic, psychosexual and environmental factors. The *uterine black box* is indeed the secret setting of powerful biological and subtle psychosexual dynamics. It is powerfully modulated in the postnatal life by endocrine, affective, psychosexual and contextual factors.

In times when gender identity disorders (GID), namely, gender dysphoria (GD), are increasing, physicians are requested to consult in areas where little or no information and learning were offered during the standard medical training. The long path of "becoming a woman" is therefore presented here with the special perspective of the many challenges a child and an adolescent girl have to face when they are not that happy of being and feeling female. The goal is to offer insight and considerations on the process of gender identity construction in girls, rooted in current guidelines and inspired by the author's clinical experience, to empower colleagues' confidence when dealing with such a delicate and multifaceted issue [1–7].

A. Graziottin, MD

Center of Gynecology and Medical Sexology, H. San Raffaele Resnati, Via Enrico Panzacchi 6, Milan 20123, Italy

Graziottin Foundation for the Cure and Care of Pain in Women -NPO, Milan, Italy e-mail: direzione@studiograziottin.it; segreterial@studiograziottin.it; http://www.alessandragraziottin.it; http://www.fondazionegraziottin.org

[©] Springer International Publishing Switzerland 2017

E. Costantini et al. (eds.), *Female Sexual Function and Dysfunction*, DOI 10.1007/978-3-319-41716-5_5

5.2 The Challenge of Women's Sexuality

Human sexuality encompasses three major dimensions: *sexual identity, sexual function* and *sexual relationship* [2]. *Gender identity, gender role* and *gender orientation* are considered major contributors of sexual identity [2]. Encompassing the concept of sexuality, a major focus is currently devoted to the gender issues, with three readings:

- Gender identity (which overlaps with the concept of sexual identity)
- Gender role (a subspecification of the sexual identity)
- Sexual (gender) orientation [3]

Satisfaction with the gender identity outcome depends on a number of variables that deserve the highest multidisciplinary consideration [2–6].

5.3 The Body's Secrets and Gender Issues

The sense of personal identity and gender identity are rooted first in the physical appearance, as Freud stated back in 1923 [1]. The body issue of gender appearance, the way we look and the way we perceive our look is vital for each of us in the lifespan and, even more so, for children/adolescents with gender dysphoria. Early on, in 1912, Sigmund Freud wrote "anatomy is destiny" [8]: the aspect of the external genitalia at birth is the first social cornerstone of gender identity leading to the attribution of the "anagraphic sex". The description as "male" or "female" usually triggers comprehensive family and social interactions oriented first to appreciate and reinforce the self-perception of the child as either a boy or a girl and, second, his/her adherence to the gender norms of that family and cultural belonging [2, 9].

In girls, a rewarding *identification with the mother* (or another affectively persistent/constant significant female caregiver, such as the grandmother in many families) and a satisfying *complementation with the father* (or another affectively persistent/constant respectful male figure) further contribute to develop a solid and satisfied female gender identity [2, 3]. This positive self-perception is well expressed in the statement, "I'm happy to be a girl": feminine, joyful, tender, pretty, vital, energetic, enjoying playing, learning and dynamically interacting with age-mates, friends and adults in the process of expressing herself at best [3].

5.4 The Endocrine Priming of the Brain and Body

5.4.1 Becoming a Girl

To understand the vulnerabilities of the gender identity process, a few words should be devoted to the basic biological steps of gender differentiation. The female genital organs (and the brain) differentiate in the feminine phenotype during the embryonic period without particular hormonal influences, whilst "becoming a boy" requires active androgens production since the early stages of embryonic development. This biological asymmetry is key for the reading of the biological contributors of gender dysphoria. Indeed the *female is the default programme* [10] exemplified in XO subjects (Turner syndrome): they are infertile, but the external genitalia are female and the behaviour is female. Not one case of gender dysphoria in Turner syndrome women is reported in the literature, in this author's knowledge.

In chromosomic girls, androgens are necessary to partially masculinise the brain, body and genitals. Androgens can be of foetal origin, such as in the adrenogenital syndrome, maternal or, rarely, exogenous. In girls, this author's working hypothesis is that psychodynamic, affective and contextual factors may contribute to a mild GD of "defensive" motivational origin, whilst more severe GD up to a frank "expressive" transsexualism requires an androgenic priming at least of the brain, if not of the genitals.

5.4.2 Becoming a Boy

During the foetal life, the production of androgens at male physiologic levels for the gestational age [10] is essential to differentiate internal and external genitalia into the "male" organs and functions. In boys, a reduced androgenic priming of the brain may lead to the emergence of the original basic female brain, with coherent feeling and behaviours. Opposite to the Bible's narrative, it is Adam that is born by androgen-driven differentiation from Eve's basic body, both in the brain and in the genitals. Inadequate androgen priming may contribute to inadequate development of external genitalia and insufficient brain androgenic priming, up to intersex ambiguous appearance.

There are three key directors of male gonad differentiation:

- The sex-determining region Y protein (SRY) also known as testis-determining factor (TDF) [11]. It is a protein that in humans is encoded by the SRY gene located in the Y chromosome. Its expression causes the development of primary sex cords, which later develops to seminiferous tubules. These cords form in the central part of the yet-undifferentiated gonad, turning it into a testis. The nowinduced Leydig cells of the testis start secreting testosterone, whilst the Sertoli cells produce anti-Mullerian hormone, which inhibits the development of the Mullerian ducts into the female inner genitalia (salpinges, uterus, vagina).
- 2. Androgens, secreted by the Leydig cells, further "force" the basic programme into the progressively male phenotype.
- 3. Anti-Mullerian hormone (AMH) produced by Sertoli cells in men and by the granulosa cells of the ovary in women further contributes to direct the process into suppressing the female code whilst enhancing the male one.

The gonadal differentiation takes place since the early gestational weeks; in the second month of the foetal life, the female phenotype depends therefore on the

absence of sexual SRY protein, androgens and anti-Mullerian hormone (AMH), leading to gonads composed of an inner medulla (ovarian stroma) and an outer cortex (parenchyma).

The biological asymmetry in the process of gender differentiation may explain why gender identity disorders are more prevalent in the male gender, although reliable epidemiological data are still lacking [12]. In terms of probability, in chromosomic XY boys, it is more likely that a biologically complex process (the androgenisation of the basic female body and brain) undergoes disruptions and inadequacies leading to a self-perception and "hard-wired" inner body image more adherent to the basic female gender programme than vice versa.

5.5 "I Want to Wear Trousers"

In children and adolescent girls, "I want to be a boy" is the alerting "tip of the iceberg" of a very heterogeneous set of psychodynamic and biological conditions that require the highest empathic clinical attention [13–16].

Indeed gender identity disorders encompass a spectrum of very different motivations, defensive and expressive, perceived first at the emotional level and then progressively at the cognitive one (Table 5.1).

5.5.1 In Flight from Femininity: The Defensive Motivation

At one extreme, clinicians recognise girls *in flight from femininity*: when the female gender is perceived as "the losing one". This is the *defensive* motivation against a female condition recognised as humiliating, restrictive, submissive and abused, in all the cultures and family contexts that still are built on limiting women's right to express themselves at their best whilst imposing a pervading social code of women's inferiority. Predisposing, precipitating and maintaining factors can be considered.

- A. *Predisposing factors* Different biological factors can interact with psychosexual ones:
 - Biological gender uneasiness may progress to a severe dysphoria with the contribution of:
 - 1. *Not yet* detected endocrine factors acting on the brain, during pregnancy, such as high level of maternal stress with an increase of adrenal androgens

Table 5.1 "I wanted to wear only trousers": motivations to behave as male in prepubertal girls

Defensive against a female condition perceived as submissive, limiting, losing, restrictive and obsolete

Expressive of desires, needs, interests, talents, vocations and passions typical of male children

Modified from Graziottin [39]

- 2. Subclinical level of adrenal congenital hyperplasia both in foetal life and early childhood
- 3. Iatrogenic drugs administered in pregnancy [2]
- Psychosexual
- *Inadequate identification with the mother* and lack of a meaningful female significant other. The damage for the sexual identity is more pervasive when the mother is perceived as detached, emotionally distant, neglecting, refusing and abusive from the early days/months of life. This could become a prominent cofactor in the girl's progressive refusal of the female gender identity. A parallel, stronger identification with the father, or a significant other positive male in the family, including a loved brother or grandfather, may facilitate the desire/choice of becoming a boy. In girls, when the process of identifying with the same gender parent (the mother) and complementing with the parent of the opposite gender (the father) is disrupted, a major psychodynamic contributor to a gender dysphoria is in play. *Too much father, too little mother* from the early days/months of life well describes the parental scenario contributing to a stronger identification with the father or his stable male surrogate. An androgenic priming during the foetal life may predispose to and potentiate such a shift.
- The *disappointment/delusion about the femininity* at receiving two types of role messages:
 - *Girls must not behave as such*, and similarly restrictive messages, expressed and repeated both with words and reproaching attitudes (sights, feelings, tones of the voice, verbal and physical punishments). The active and vital girl who wants to express herself may feel that her personal talents ("stereotypically" considered appropriate for boys) are literally killed. She may feel a progressive sense of rage, anger and rebellion towards the female "stereotypes". The leading thought, "Why boys can do what they want and I can do nothing?" may gradually drive her inner perception into the thought that "she must be a boy if she feels that way".
 - *Girls must help moms at home*, the early recruitment in all kinds of homework, whilst boys can still play is still active in many cultures and in families of lower socioeconomic setting. Caring of younger sibling, cleaning the house and dresses, ironing, cooking and in many cultures still serving the family men are the only allowed roles. The oppression of being a girl, repressed and humiliated by gender role female duties, may lead to sadness and depression. Girls who do not surrender to this kind of forced and stereotyped female role identity may gradually shift to desire a male gender role if not a full male gender identity.
- *Perception of sexual vulnerability.* The experience of sexual violence, within and/or outside the family, may induce serious disruptions in the growth of sexual identity and sense of self-worth. For these unfortunate children, who have been sexually harassed or abused, being a girl equals being a prey [3]. The need to avoid the perpetuation of the abusive context may induce different "self-protective" dynamics: from "I want to wear only trousers" (still a symbol of male

gender role in many cultures) perceived as an armour, a defence and a key for freedom [17] to "I want myself to become a boy".

- B. *Precipitating factors* A "collapse of awareness" about having GD may be triggered by other key events:
 - · Mediagenic transsexualism. The increasing media visibility of gender disorder may offer to the confused child and adolescent the "magic" solutions to her inner problems, difficulties and emotional turmoil. A kind of dangerous "self-fulfilling prophecy", more insidious in children with a weak sexual identity, or with non-transsexual gender dysphoria, when they are desperately looking for a definitive, solid identity, whatever it could be. The defensive motivations presented above may lead to a clinical diagnosis of gender dysphoria: this label should be "handed with care" and possibly kept on hold (or expressed as a very mild disorder). Colette Chiland [18], a psychiatrist with an extensive experience with children and adolescent gender disorders, warns against an early use of "diagnostic etiquettes" as such, given the high plasticity of gender identity in the lifespan and maximum at adolescence. She suggests that psychotherapeutic support should be offered to the child/girl and to the family, to improve the psychological well-being within the gender of *birth*. An empathic, skilled and experienced female psychotherapist may do a good job for and with the child. The enormous psychoplasticity of young brains may ease the goal of a satisfactory mediation in a loving and respectful female therapeutic setting.

Precipitating factors include [2, 3]:

- The onset of puberty, with the appearance of breast and periods, forcing the girl to move from a "totipotent, partially undifferentiated identity" to a definite female gender: a shocking discovery for many GD girls [19]
- The perception of a disturbing/unaccepted homosexual drive
- A disturbing drive to masturbation, "unacceptable" for the girl as pleasure derives from the stimulation of the "hated" and somehow "untouchable" female genitalia
- The loss of a very significant relative, often the father or a surrogate male parent (usually the grandfather)
- *Maintaining* factors include on one side the unaddressed persistence of predisposing and precipitating factors and on the other the lack of professional support with a careful evaluation of defensive vs expressive GD conscious and unconscious motivations.

5.5.2 The Expressive Motivation

I'm a boy trapped in a girl's body. This is the core perception of girls at the opposite end of the spectrum of gender dysphoria (with all the mixed motivations in between). The want to *become a boy expresses lifelong desire, vocation, interests and talents, more typical of a male child.* It is not a denial of or a flight from femininity, but the real

feeling of belonging to the male gender, with male "body image" and "body feelings" hard-wired into the brain [20]. Usually these girls are recognised as "boys" from agemate companions since the first 2–3 years of life. Motivations and emotions to become a boy can be variably enhanced and supported by biological contributors. One of the most powerful biological contributor is brain-derived neurotrophic factors (BDNF) (with current more evidence, however, in male to female GD) [21, 22].

5.6 Emotions, Neurovegetative Pathways, Motor and Hormonal Correlates

The physical appearance is shaped by the emotions that live and express themselves in the neurovegetative physical domain. Desire, anger, fear and panic with separating distress, the four basic emotions command systems [23], immediately express themselves in the whole body (they live within and with the body) and are the first experience we all have of our being alive, loved, disregarded/ neglected or hated.

Emotions are not a cloud of feelings over the head. They have very solid somatic correlates, mediated by the *neurovegetative system* (that appears to be up-regulated in persons with GD). They have an immediate *motor expression: moving towards* for desire, *fight or flight* for fear, *moving against* for anger and *looking for a comforting presence/hug* for panic with separation distress [23]. Emotions indeed reshape continuously the perception of human body image, further modulated by affective dynamics and mood. Cognitive issues further contribute. Emotions are continuously modulated by *hormones* and by sexual hormones in the foetus and then from puberty onwards. This is why endocrine medical issues are critical in this field. To reach and maintain a new, positive F to M identity requires more than a number of successful operations (but the quality of surgical outcome is certainly a powerful prerequisite).

5.7 Time: The Advantages of a "Pubertal Delay"

"To delay puberty or not"? This is the painful dilemma that parents and health-care providers have to face when looking for the best for a daughter and patient with GD. The appearance of breast, periods and female body shape is a major physical and emotional shock for a girl with lifelong GD. The breast growth elicits negative feelings (girls with GD usually detest it) and triggers the social comments on her "frightening" (as she perceives it) becoming "a real woman". All girls with GD use any type of constrictive and covering garments and attitudes (tight breast fasciae, posture with bent shoulders, oversize pullovers and jackets) to minimise the social perception/appreciation of the breast growth. Why not prevent/delay this growth? Menarche appearance causes a major waste of emotional and physical energy that would be better utilised on the psychosexual work and real-life issues.

Time is key: a right treatment in the wrong moment – for that individual patient – is wrong. The age at puberty determines a basic gender-related, often neglected, somatic fact: *height*. In women, the progressive estrogens' uprise leading to menarche coincides with the end of the height growth, with very few centimetres obtained afterwards in a minority of girls (the taller ones). Estrogens close the long bone cartilages that in childhood allow and modulate the lengthening of long bones. Within the large variety linked to race, family genes, food and light availability, males are usually taller than females. Puberty can be delayed for a few years with GnRH analogue (GnRHa): a kind of "puberty on hold", a "sleeping puberty" as it can be explained to young patients and parents, totally reversible when the final decision – to change sex or not – is finally and more serenely taken. Blocking pubertal development at Tanner stage 2 for prepubertal, gender nonconforming children is a relatively new but reversible and highly beneficial strategy to delay puberty, giving patients and families time to come up with a transition plan – a real life-saving choice [24].

Growth hormone (GH) administered in parallel to GnRHa seems to promote height's growth more than the analogues alone in prepuberal girls with central precocious puberty [25]. GH and GnRHa combined have been used in children with idiopathic short stature, obtaining a height increase of 1.0–1.3 SD [26].

No controlled studies with GH have been carried out so far in GD girl, in this author's knowledge. The issue needs to be explored prospectically to evaluate if the advantages theoretically considered here can be substantiated in GD patients.

As discussed above a *pubertal delay*, from 10–12 up to 14–16 years of age, would offer a number of potential *advantages* to girls with lifelong gender dysphoria (F to M).

5.8 Practical Tips for the Clinician Dealing with Gender Disorders

A few distilled suggestions, rooted from the author's clinical practice and current literature, highlight the importance of a balanced approach to the many biological and psychosexual issues elicited by GD.

- Biological advantages that should be discussed with the young patient and her parents include:
 - Height: to gain 10–15 cm or more in comparison to the height of a normal puberty would be a major advantage for an F to M girl, in terms of body image, self-perception and sense of personal beauty and worthiness. The physical appearance, and inner self-perception, would further benefit from:
 - *Regular physical exercise* that should be encouraged and recommended: its anti-inflammatory effect may have multiple advantages, physical and emotional. Reduction of neuroinflammation, thanks to a regular physical activity, is a major contributor to a better mood [3].
 - *Stronger muscle growth:* this contributes to the perception of a more solid body shape and body image [27].

- *Better mood:* is to be pursued with healthy lifestyles, physical exercise first. Sports induce a physiologic motor discharge of negative emotions (so high in patients with gender dysphoria), increase endorphins, dopamine and serotonin, thus contributing to a better psychotherapeutic emotional approach to the disturbing gender issues. Every child and adolescent should be encouraged to be active, to play and commit himself/herself to a sport of choice. Indeed *physical exercise* improves brain plasticity, behaving as a kind of *endogenous pharmacotherapy* [28]. It improves the perception of well-being: its usefulness should be explored in controlled studies in girls with GD.
- *Vitamin D level*: it should be checked periodically, and its *supplementation* when appropriate is to be recommended in pre- and postpubertal girls with GD. A prospective study indicate a very significant correlation between hypovitaminosis D and precocious puberty [29, 30], a problem that would be even more relevant in girls with GD, as all their psychosexual problems would be exasperated.
- *Calcium intake:* it should be adequate (at least 1000 mg/day) [31]. Calcium supplementation should be considered when the daily intake is inadequate and in lactase-deficient girls to contribute to an optimal bone mass even if prolonging the prepubertal amenorrhea with GnRHa and GH.
- *Dehydroepiandrosterone (DHEA):* its supplementation could be considered to further support the height and muscle growth. Unfortunately no controlled studies are available on these issues in this author's knowledge. The overall feeling is that these important biological aspects are still underconsidered in the management of lifelong or early-onset GD in girls.
- Psychosexual advantages of a pharmacologic (reversible) delay of puberty:
 - It potentiates the opportunity to work on the many psychosexual issues involved, whilst the girl is still in a "neutral" physical state, not yet overdetermined by the appearance of secondary sex characteristics: a still nonadequately appreciated opportunity. In the Netherlands, gender dysphoric adolescents may be eligible for puberty suppression at age 12, subsequent cross sex hormone treatment at age 16 and gender reassignment surgery at age 18. Initially, a thorough assessment is made of the gender dysphoria and vulnerabilities in functioning or circumstances. Psychological interventions and/or gender reassignment may be offered, with increase wellbeing in GD adolescent patients [32]. In GD girls, withholding physical medical interventions, such as the pharmacologic pubertal delay, seems currently more harmful to the well-being in both adolescence and adulthood when compared to cases where physical medical interventions were provided [33]. The Japanese guidelines revised in 2012 suggest delaying puberty with GnRHa until the age of 15, after which cross sex hormones may be given if appropriate [34].
 - It *reduces depression and emotional problems*. Ongoing studies have demonstrated that in adolescents treated with GnRH from 12 up to 16 years of

age, behavioural and emotional problems and depressive symptoms decreased, whilst general functioning improved significantly during puberty suppression. The authors conclude that puberty suppression may be considered a valuable contribution in the clinical management of GD in adolescents [35].

Key Point There is a growing consensus that treatment with gonadotropinreleasing hormone analogue and/or cross sex hormones, in collaboration with transgender-competent mental health professionals, is an intervention that appears to be appropriate in carefully selected youth with gender dysphoria [36].

The attitude of working with psychosexual support and medical cross hormonal treatment, whilst postponing surgery after the age of 18, is well defined in the GD M to F scientific literature [37].

Postponing puberty seems to be the most reasonable approach. From the studies that have been published so far, it seems that the benefits outweigh the risks. However, more systematic research in this area is needed to determine the safety of this approach [38].

The advantages include the "protection" from negative symptoms associated with periods. Menarche, a challenging experience per se in GD girls, is even more disturbing if it is associated with heavy periods; dysmenorrhea, which increases significantly with increasing biological and/or psychosexual stress [3, 39, 40]; and premenstrual symptoms (depression, irritability, aggressivity outbursts, headache, food cravings, mastodynia, abdominal bloating) [39, 41] contributing to her perception that menstruation is a curse in such a detested gender of birth. Since the appearance/diagnosis of a GD, encouraging sport, music, dancing, all the activities that improve the girl's personal skills should be encouraged with the girl and the family: they may offer a natural positive experience of the body reality, increase self-esteem and age-mates' respect, favour social connections whilst reducing the tendency to pursue the monomanic obsession of gender concerns and the tendency to isolate in a kind of virtual life. Given the complexity of factors and the importance of the therapeutic decisions, hormone treatment for pubertal suppression and subsequent gender transition needs to be always individualised within stringent protocols in multidisciplinary specialist units [42].

5.9 Relational Factors in Prepubertal Girls with GD

Family dynamics can be major contributors in the modulation of gender dysphoria, in the timing of the search for a professional help and in supporting the child in her desperate pursuit of a comforting and comfortable sexual identity [2, 3]. Quality of relationships with age-mates and teachers may further contribute. Relational factors play a lifelong major dynamic role in the lifelong reshaping of human sexual identity. They maintain such a role in GD girls as well. A search of identity often dreamed of, caressed and cultivated as an endless promise of happiness, which unfortunately is not the case in the majority of GD individuals.

5.10 Professional Issues in Prepubertal Girls with GD

In prepubertal girls with GD, the professional support should have at least five major goals:

- To establish a deep, meaningful, warm and empathic relationship, based on nonjudgemental trust, but at the same time with concrete perspectives on real-life issues and challenges [43, 44]
- To understand, share and evaluate the conscious and unconscious motivations to sex reassignment, when dreamed of and requested [2, 3, 45]
- To consider and discuss with the girl her expectations (real and delusional, mainly on the cosmetic and sexually functional outcome) [2, 3]
- Critically important, to consider a well-tailored and timely pharmacological intervention:
 - To delay puberty and optimise growth (with GnRH analogues and possibly GH) [3, 44, 46–48]
 - To integrate vitamins (D first of all) and oligoelements (iron first, as anaemia is a major contributor to depression) when indicated [10]
 - To ease the suffering with antidepressants, anxiolytics or antipsychotics, when specifically indicated and when "giving words to the emotional pain", with a psychotherapeutic support, is not enough to facilitate their search for a more satisfying identity [14]
- To support the family with a psychodynamic intervention [3]

5.11 Which Is the Optimal Age for the Surgical Decision: Legal Aspects

Which is the optimal age for a girl with GD to decide for her future? At 16 years of age, when many countries recognise the maturity to get a driving licence and vote, a comprehensively diagnosed and supported GD F to M girl is more likely to be able to make her final choice. The outcome can be optimal only if she has been maintained in a prepubertal status by a well-tailored pharmacologic treatment: this will allow her starting the appropriate hormonal treatment and then be operated of hysteroannessiectomy, or her remaining in her gender of birth, with a variable modulation of her final goals. When the diagnosis of severe gender dysphoria is accurate, all the examined and followed-up adolescents with a pharmacologically delayed puberty have far better psychological, emotional and general life adjustments, a smoother transition to hormone treatment and sex reassignment [2, 3, 36, 46–48].

5.12 Surgical Aspects of Delaying Puberty in Severe GD

To *keep puberty on hold* has a number of practical and very relevant consequences. By avoiding the breast growth, the girl will be spared the view, touch, proprioception and perception of an organ she detests and the surgical trauma of a mastectomy later on in life. By preventing the appearance of periods, the girl will be spared the perception of a disturbing organ and function that could later on be removed with likely far less emotional (and physical?) costs. By preventing the development of a female body shape, often with cellulitis and stretch marks, a number of cosmetic interventions may be prevented later on in life. The overall result would be a significant reduction of the number of surgeries and potential side effects, an optimal timing of surgery and a far better general cosmetic outcome and psychosexual achievement. A choice and a process more likely to be closer to a well-assisted pursuit of the best personal sexual identity than leaving the "natural" pubertal process to go on with enormous distress and more physical consequences. Finally, what is the adolescents' perception of the opportunity and meaning of delaying puberty?

A very accurate qualitative study [48] focusing on adolescent's wording and reading of a pharmacologically retarded puberty, carried out in the Netherlands, finds out three major themes:

- 1. The difficulty of determining what is an appropriate lower age limit for starting puberty suppression. Most adolescents found it difficult to define an appropriate age limit and saw it as a dilemma.
- 2. The lack of data on the long-term effects of puberty suppression. Most adolescents stated that the lack of long-term data did not and would not stop them from wanting puberty suppression.
- 3. The role of the social context, for which there were two subthemes: (a) increased media attention, on television and on the internet; (b) an imposed stereotype. Some adolescents were positive about the role of the social context, but others raised doubts about it.

Compared to clinicians, adolescents were often more cautious in their treatment views. It is important to give voice to gender dysphoric adolescents when discussing the use of puberty suppression in GD. Otherwise, professionals might act based on assumptions about adolescents' opinions instead of their actual considerations, a golden recommendation that holds its powerful truth in the whole lifespan. Listening carefully, empathically and competently to patients' complaints, symptoms, expectations and dreams remains the golden way to a proper diagnosis and well-tailored treatment. A treatment that may as well differ from the current guide-lines when the careful listening to the young patients' need suggests to have a different approach [48].

5.13 The Challenge of Caring About Gender Issues

Last, but not least, a higher awareness about the multiple barriers that prevent the proper approach to gender issues is needed to change both our clinical attitudes and the quality of diagnostic and therapeutic setting that can be offered.

To pursue this goal, it is first key to listen to *our* inner emotions when a child or an adolescent asks for help for her uneasiness about being a woman or for a frank gender dysphoria, either explicitly or through her behaviour. Awareness about our countertransferral dynamics, as physicians and human being, is the first step for the proper emotional setting when a gender issue is complained of by our patients. Second, a basic knowledge on the key biological and psychosexual contributors of gender identity construction and development is essential. Third, a major effort should be devoted to reduce the rigid barriers that prevent an adequate diagnosis and care of gender issues. Current studies describe barriers spanning six themes: (1) few accessible paediatric and gynaecological providers are trained in gender-affirming health care, (2) lack of consistently applied protocols, (3) inconsistent use of chosen name/pronoun, (4) uncoordinated care and gatekeeping, (5) limited/delayed access to pubertal blockers and cross sex hormones and (6) insurance exclusions [49].

Recommendations include:

- 1. Mandatory training on gender-affirming health care and cultural humility for providers/staff
- 2. Development of protocols for the care of young transgender patients, as well as roadmaps for families
- 3. Asking and recording of chosen name/pronoun
- 4. Increased number of multidisciplinary gender clinics
- 5. Providing cross sex hormones at an age that permits peer-congruent development
- 6. Designating a navigator for transgender patients in clinics

The most accurate evaluation of physical, emotional, psychoaffective, relational and contextual difficulties should be taken into account to evaluate the best options. The goal is to offer the girl/patient (and her family) real expectations about the potential outcomes prior to start a long treatment path still rich of unappreciated uncertainties and risks.

Conclusion

Becoming a woman is a long path. The need of a solid sexual identity is even more compelling today, in a world where gender differences are becoming more elusive or denied. Gender dysphoria is certainly a complex and challenging issue first for the patient, a human being that bears a tremendous need and drive to find out and determine once and for all who she/he really is. It is challenging for the family, often unaware of the intense suffering of the child and of the intrinsically complex tasks of gender reassignment pathways. It is difficult for the health-care providers who are required to have and offer a well-balanced human touch and professional skill in an extremely complex area.

The early diagnosis of severe GD in girls and the serious consideration of the many aspects it involves should induce the health-care providers to pharmacologically *delay* the onset of puberty, whilst appropriately supporting the growth by healthy lifestyles, with optimal diet; vitamins (especially vitamin D); oligoelements such as calcium, magnesium and iron when indicated; regular daily exercises and respect of the sleep hours (at least 7, better 8); and avoidance of alcohol, smoke or drugs: all aspects frequently neglected, in this author's knowledge. Antidepressants, anxiolytics and antipsychotics should as well be considered in selected cases.

The goal is to get quality years of personal and physical growth to optimise a more matured and "digested" choice whatever it would be: either remaining in the gender of birth with appropriate, more satisfying inner adjustments or move to a final male gender identity with real expectations and a higher probability of having them fulfilled.

References

- 1. Freud S. Das Ich und das Es. Wien: Internationaler Psychoanalytischer Verlag; 1923.
- Baldaro Verde J, Graziottin A. L'enigma dell'identità Il transessualismo. Torino: Edizioni Gruppo Abele; 1991.
- Graziottin A. The hot questions of prepubertal gender dysphoria in girls. In: Trombetta C, Liguori G, Bertolotto M, editors. Management of gender dysphoria. A multidisciplinary approach to transsexualism. Milan: Springer; 2014. p. 217–27.
- 4. Ercan O, Kutlug S, Uysal O, et al. Gender identity and gender role in DSD patients raised as females: a preliminary outcome study. Front Endocrinol (Lausanne). 2013;4:86–93.
- 5. Sandberg DE, Gardner M, Cohen-Kettenis PT. Psychological aspects of the treatment of patients with disorders of sex development. Semin Reprod Med. 2012;30(5):443–52.
- Martin CL, DiDonato MD, Clary L, et al. Preschool children with gender normative and gender non-normative peer preferences: psychosocial and environmental correlates. Arch Sex Behav. 2012;41(4):831–47.
- 7. Mattila AK, Fagerholm R, Santtila P, et al. Gender identity and gender role orientation in female assigned patients with disorders of sex development. J Urol. 2012;188:1930–7.
- Freud S. Über die allgemeinste Erniedrigung des Liebeslebens (Beiträge zur Psychologie des Liebeslebens, Bd. 2). Jahrbuch f
 ür psychoanalytische und psychopathologische Forschungen. 1912;4(1):40–50.
- 9. Money JW, Ehrhardt AA. Man & woman, boy & girl: gender identity from conception to maturity. Northvale: Jason Aronson; 1996.
- Graziottin A, Gambini D. Anatomy and physiology of genital organs. Women: what is relevant for the clinical practice. In: Vodusek D, Boller F, editors. Neurology of sexual and bladder disorders (Handbook of clinical neurology, Vol. 130, 3rd Series). Amsterdam: Elsevier BV; 2015. p. 39–60.
- Harley VR, Clarkson MJ, Argentaro A. The molecular action and regulation of the testisdetermining factors, SRY (sex-determining region on the Y chromosome) and SOX9 [SRYrelated high-mobility group (HMG) box 9]. Endocr Rev. 2003;24(4):466–87.
- Shields JP, Cohen R, Glassman JR, et al. Estimating population size and demographic characteristics of lesbian, gay, bisexual, and transgender youth in middle school. Adolesc Health. 2013;52(2):248–50.
- Levine DA, Committee On Adolescence. Office-based care for lesbian, gay, bisexual, transgender, and questioning youth. Pediatrics. 2013;132(1):e297–313.
- 14. Leibowitz SF, Telingator C. Assessing gender identity concerns in children and adolescents: evaluation, treatments, and outcomes. Curr Psychiatry Rep. 2012;14(2):111–20.
- Wallien MS, Cohen-Kettenis PT. Psychosexual outcome of gender-dysphoric children. J Am Acad Child Adolesc Psychiatry. 2008;47(12):1413–23.
- Drummond KD, Bradley SJ, Peterson-Badali M, Zucker KJ. A follow-up study of girls with gender identity disorder. Dev Psychol. 2008;44(1):34–45.
- 17. Cardella L. Volevo i pantaloni. Milan: Mondadori; 1989.
- 18. Chiland C. Enfance et transsexualisme. Psychiatr Enfant. 1988;31(2):313-73.

- Steensma TD, Kreukels BP, de Vries AL, Cohen-Kettenis PT. Gender identity development in adolescence. Horm Behav. 2013;64(2):288–97.
- Ramachandran VS, McGeoch PD. Occurrence of phantom genitalia after gender reassignment surgery. Med Hypotheses. 2007;69(5):1001–3.
- Fuss J, Biedermann SV, Stalla GK, Auer MK. On the quest for a biomechanism of transsexualism: is there a role for BDNF? J Psychiatr Res. 2013;47(12):2015–7.
- Fontanari AM, Andreazza T, Costa ÂB, et al. Serum concentrations of brain-derived neurotrophic factor in patients with gender identity disorder. J Psychiatr Res. 2013;47(10): 1546–8.
- 23. Pankseep J. Affective neuroscience: the foundations of human and animal emotions. New York: Oxford University Press; 1998.
- 24. Forcier MM, Haddad E. Health care for gender variant or gender non-conforming children. R I Med J. 2013;96(4):17–21.
- Pasquino AM, Pucarelli I, Segni M, et al. Adult height in girls with central precocious puberty treated with gonadotropin-releasing hormone analogues and growth hormone. J Clin Endocrinol Metab. 1999;84(2):449–52.
- Wit JM, Balen HV, Kamp GA, Oostdijk W. Benefit of postponing normal puberty for improving final height. Eur J Endocrinol. 2004;151 Suppl 1:S41–5.
- Scerpella TA, Dowthwaite JN, Gero NM, et al. Skeletal benefits of pre-menarcheal gymnastics are retained after activity cessation. Pediatr Exerc Sci. 2010;22(1):21–33.
- Sale A, Berardi N, Maffei L. Environment and brain plasticity: towards an endogenous pharmacotherapy. Physiol Rev. 2014;94(1):189–234.
- Villamor E, Marin C, Mora-Plazas M, Baylin A. Vitamin D deficiency and age at menarche: a prospective study. Am J Clin Nutr. 2011;94(4):1020–5.
- 30. Chew A, Harris SS. Does vitamin D affect timing of menarche? Nutr Rev. 2013;71(3): 189–93.
- Esterle L, Nguyen M, Walrant-Debray O. Adverse interaction of low-calcium diet and low 25(OH)D levels on lumbar spine mineralization in late-pubertal girls. J Bone Miner Res. 2010;25(11):2392–8.
- Cohen-Kettenis PT, Steensma TD, de Vries AL. Treatment of adolescents with gender dysphoria in the Netherlands. Child Adolesc Psychiatr Clin N Am. 2011;20(4):689–700.
- 33. de Vries AL, Cohen-Kettenis PT. Clinical management of gender dysphoria in children and adolescents: the Dutch approach. J Homosex. 2012;59(3):301–20.
- 34. Nakatsuka M. Puberty-delaying hormone therapy in adolescents with gender identity disorder] [Article in Japanese. Seishin Shinkeigaku Zasshi. 2013;115(3):316–22.
- de Vries AL, Steensma TD, Doreleijers TA, Cohen-Kettenis PT. Puberty suppression in adolescents with gender identity disorder: a prospective follow-up study. J Sex Med. 2011; 8(8):2276–83.
- Khatchadourian K, Amed S, Metzger DL. Clinical management of youth with gender dysphoria in Vancouver. J Pediatr. 2013. doi:10.1016/j.jpeds.2013.10.068 [Epub ahead of print].
- Milrod C. How young is too young: ethical concerns in genital surgery of the transgender MTF adolescent. J Sex Med. 2014;11(2):338–46.
- 38. Kreukels BP, Cohen-Kettenis PT. Puberty suppression in gender identity disorder: the Amsterdam experience. Nat Rev Endocrinol. 2011;7(8):466–72.
- 39. Graziottin A. "The shorter, the better": a review of the evidence for a shorter contraception hormone-free interval. Eur J Contracept Reprod Health Care. 2015;20:1–13.
- 40. Iacovides S, Avidon I, Bentley A, Baker FC. Reduced quality of life when experiencing menstrual pain in women with primary dysmenorrhea. Acta Obstet Gynecol Scand. 2013. doi:10.1111/aogs.12287 [Epub ahead of print].
- Craner J, Sigmon S, Martinson A, McGillicuddy M. Perceptions of health and somatic sensations in women reporting premenstrual syndrome and premenstrual dysphoric disorder. J Nerv Ment Dis. 2013;201(9):780–5.
- 42. Hewitt JK, Paul C, Kasiannan P, et al. Hormone treatment of gender identity disorder in a cohort of children and adolescents. Med J Aust. 2012;196(9):578–81.

- 43. Schwartz D. Listening to children imagining gender: observing the inflation of an idea. J Homosex. 2012;59(3):460–79.
- 44. Zucker KJ, Wood H, Singh D, Bradley SJ. A developmental, biopsychosocial model for the treatment of children with gender identity disorder. J Homosex. 2012;59(3):369–97.
- 45. Ehrensaft D. From gender identity disorder to gender identity creativity: true gender self child therapy. J Homosex. 2012;59(3):337–56.
- 46. Hembree WC. Guidelines for pubertal suspension and gender reassignment for transgender adolescents. Child Adolesc Psychiatr Clin N Am. 2011;20(4):725–32.
- 47. Vrouenraets LJ, Fredriks AM, Hannema SE, Cohen-Kettenis PT, de Vries MC. Perceptions of sex, gender, and puberty suppression: a qualitative analysis of transgender youth. Arch Sex Behav. 2016. [Epub ahead of print].
- 48. Olshan J, Eimicke T, Belfort E. Gender incongruity in children with and without disorders of sexual differentiation. Endocrinol Metab Clin North Am. 2016;45(2):463–82.
- 49. Shumer DE, Spack NP. Current management of gender identity disorder in childhood and adolescence: guidelines, barriers and areas of controversy. Curr Opin Endocrinol Diabetes Obes. 2013;20(1):69–73.