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Annelou L. C. de Vries MD PhD & Peggy T. Cohen-Kettenis PhD

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Clinical Management of Gender Dysphoria in Children and Adolescents: The Dutch Approach

ANNELOU L. C. DE VRIES, MD, PhD and
PEGGY T. COHEN-KETTENIS, PhD

VU University Medical Center, Amsterdam, the Netherlands

The Dutch approach on clinical management of both prepubertal children under the age of 12 and adolescents starting at age 12 with gender dysphoria, starts with a thorough assessment of any vulnerable aspects of the youth's functioning or circumstances and, when necessary, appropriate intervention. In children with gender dysphoria only, the general recommendation is watchful waiting and carefully observing how gender dysphoria develops in the first stages of puberty. Gender dysphoric adolescents can be considered eligible for puberty suppression and subsequent cross-sex hormones when they reach the age of 16 years. Currently, withholding physical medical interventions in these cases seems more harmful to wellbeing in both adolescence and adulthood when compared to cases where physical medical interventions were provided.

KEYWORDS *gender, gender identity, gender identity disorder, gender identity disorder of childhood, gender identity disorder of adolescence, gender variance, pubertal suspension, transgender, transsexual, treatment*

The first specialized gender identity clinic for children and adolescents in the Netherlands opened its doors at the Utrecht University Medical Center in 1987. The number of applicants was initially low: No more than a few children and adolescents were referred to the clinic annually. In 2002, the clinic moved to the VU University Medical Center in Amsterdam and is now

Address correspondence to Annelou L. C. de Vries, VU University Medical Center, PO Box 7057, Amsterdam, 1007 MB, the Netherlands. E-mail: alc.devries@vumc.nl

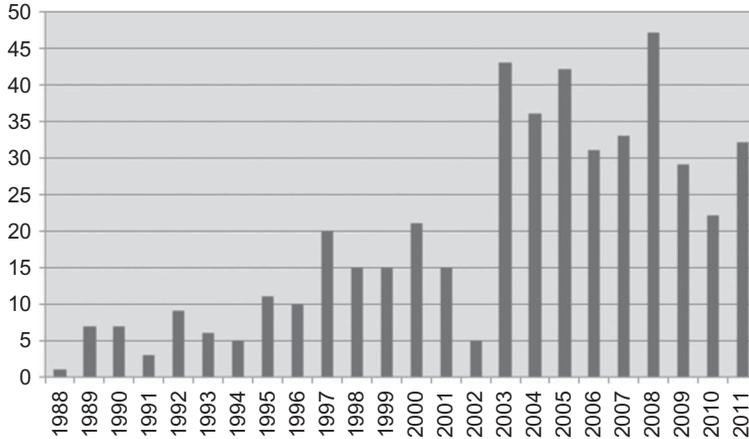


FIGURE 1 Referred children, Dutch Gender Identity Clinic, 1987–2011.

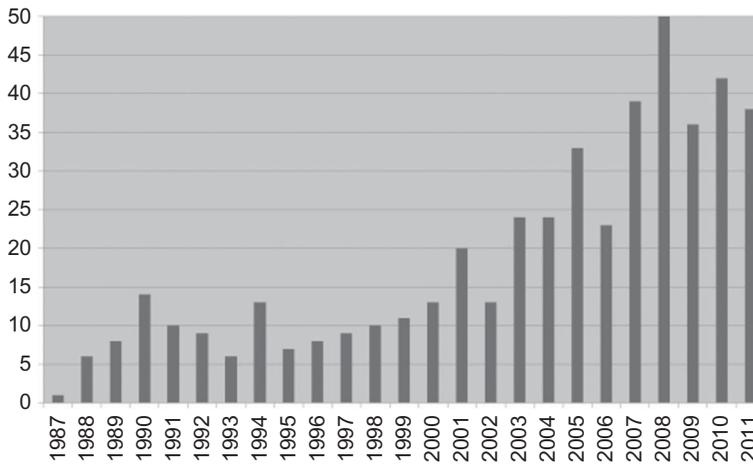


FIGURE 2 Referred adolescents, Dutch Gender Identity Clinic, 1987–2011.

part of the Center of Expertise on Gender Dysphoria. Compared to the early years, the number of referrals increased considerably. To date, more than 400 children and an almost equal number of adolescents have attended the gender identity clinic (see Figures 1 and 2).

Between 2004 and 2009, an average of 40 children and 40 adolescents registered per year for the first time at the clinic with a mean age of 8.0 and 14.3 years, respectively. In the past decade, 12- to 18-year-old adolescents have been attending the clinic in ever greater numbers and at ever younger ages (see Figures 2 and 3).

When the gender identity clinic for children and adolescents first opened, there were no diagnostic guidelines, no Dutch language screening instruments, and no guideline or protocol for dealing with gender

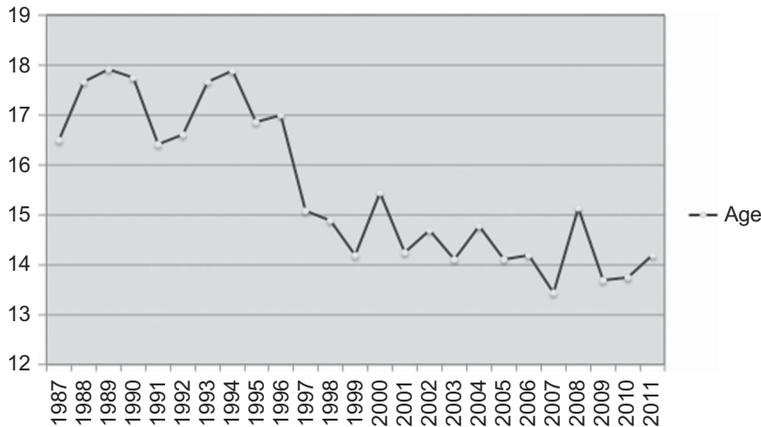


FIGURE 3 Mean age of referred adolescents, 1987–2011.

dysphoria at an early age. A great deal has been accomplished in this field in the past three decades. In addition to the increasing numbers of referrals, the care for these gender dysphoric children and adolescents has also experienced growth. Over the course of years, diagnostic protocols for children under 12 years, as well as adolescents from 12 to 18 years, of age have been constructed (Cohen-Kettenis & Pfäfflin, 2003; Delemarre-van de Waal & Cohen-Kettenis, 2006), screening and diagnostic instruments have been developed, and there are now specific approaches for both age groups.

These are not isolated developments: Outside of the Netherlands, even more experience has been gained and knowledge has expanded in the field of juvenile gender dysphoria. Various international treatment guidelines have been developed (de Vries, Cohen-Kettenis, & Delemarre-van de Waal, 2007; Di Ceglie, Sturge, & Sutton, 1998; Hembree et al., 2009; World Professional Association of Transgender Health, WPATH, 2011).

Especially with regard to the clinical management of gender dysphoria in adolescents, the Netherlands has pioneered and played a leading role internationally. The “Dutch protocol” has become proverbial in this field. Various publications have demonstrated the efficacy of parts of this approach (Cohen-Kettenis & van Goozen, 1997; de Vries, 2010; de Vries, Steensma, Doreleijers, & Cohen-Kettenis, 2010; Smith, van Goozen, & Cohen-Kettenis, 2001), although the protocol has also been subject to criticism (Korte et al., 2008).

As a likely result of the professional and media attention to the Dutch approach, there is an increasing clinical interest in the rationale and description of the ways gender dysphoria in children and adolescents is managed in the Netherlands (Kreukels & Cohen-Kettenis, 2011). However, to date such a description did not exist. In this article, we will, therefore, give an account of our diagnostic and treatment protocols, which differ for children

and adolescents. Before proceeding, we will dwell shortly on the context of views on etiology and gender development that have contributed to developing the Dutch approach. This discussion of the context is by no means complete.

CONTEXT

Etiology

No unequivocal etiological factor determining atypical gender development has been found to date. The most extreme form of gender dysphoria, Gender Identity Disorder (GID) in the current *Diagnostic and Statistical Manual of Mental Disorders* (American Psychiatric Association, 2000) is most likely a multifactorial condition in which psychosocial as well as biological aspects play some role. In recent years, a great deal of attention has been paid to biological theories (for an overview, see Meyer-Bahlburg, 2010), whereas psychosocial factors used to be considered of primary importance in the past. For instance, it was once theorized that GID was a symptom of certain psychiatric disorders such as borderline personality (Lothstein, 1984) or psychosis (a Campo, Nijman, Merckelbach, & Evers, 2003). Current studies on psychopathology among adults with GID do not support either of these conclusions (e.g., Gomez-Gil, Vidal-Hagemeyer, & Salamero, 2008; Haraldsen & Dahl, 2000; Smith, van Goozen, Kuiper, & Cohen-Kettenis, 2005).

However, the relationship between certain forms of psychopathology and GID is still not entirely clear (Meyer-Bahlburg, 2010). In adults, elevated psychopathology has been found in some studies (e.g., Bodlund, Kullgren, Sundbom, & Hojerback, 1993; De Cuypere, Janes, & Rubens, 1995; Hepp, Kraemer, Schnyder, Miller, & Delsignore, 2005). Research among children and adolescents referred to gender identity clinics has demonstrated more frequent (internalizing) psychopathology than observed in their peers from the general population (Cohen-Kettenis, Owen, Kaijser, Bradley, & Zucker, 2003; de Vries, Doreleijers, Steensma, & Cohen-Kettenis, 2011; Di Ceglie, Freedman, McPherson, & Richardson, 2002; Wallien, Swaab, & Cohen-Kettenis, 2007; Zucker & Bradley, 1995; Zucker, Bradley, Owen-Anderson, et al., 2010; Zucker, Owen, Bradley, & Ameeriar, 2002). One theory about this relationship is that a predisposition to anxiety combined with parental psychopathology in gender variant children can lead to full-blown GID (Zucker & Bradley, 1995). Zucker and colleagues (Zucker, Bradley, Ben-Dat, et al., 2003; Zucker, Bradley, & Lowry Sullivan, 1996) have found among children referred to the Toronto gender identity clinic more separation anxiety in the boys and more psychopathology in their mothers than in the general population. At the Dutch gender identity clinic, some indications were found for a predisposition to anxiety among the referred children (Wallien, Swaab, et al., 2007; Wallien, van Goozen, & Cohen-Kettenis, 2007). However, parental psychopathology was not demonstrated (Wallien, 2008).

The increasing quantity of research on typical gender development demonstrates that a number of psychological and social factors play a role (for a review, see Ruble, Martin, & Berenbaum, 2006), in addition to biological factors. It remains to be seen whether and to what degree these same influences also influence gender dysphoric development. Biological factors do seem to be involved in the etiology of GID. For example, brain anatomy and brain activation patterns are reported to be different in adult transsexuals in comparison to non-gender dysphoric controls (Carrillo et al., 2010; Garcia-Falgueras & Swaab, 2008; Kruijver et al., 2000; Luders et al., 2009; Zhou, Hofman, Gooren, & Swaab, 1995; Berglund, Lindstrom, Dhejne-Helmy, & Savic, 2008; Gizewski et al., 2009; Schoning et al., 2010). Genetic factors are also likely to be important in the development of gender dysphoria (e.g., Coolidge, Thede, & Young, 2002; van Beijsterveldt, Hudziak, & Boomsma, 2006). However, this research is still very limited and the findings are sometimes inconsistent. It is unclear whether these findings are also applicable to less extreme forms of gender dysphoria.

With the current state of knowledge, it remains most plausible that a complex interaction between a biological predisposition in combination with intra- and interpersonal factors (Crouter, Whiteman, McHale, & Osgood, 2007; Maccoby, 1998; Zucker & Bradley, 1995) contribute to a development of gender dysphoria, which may come in different forms and intensities. Assuming, therefore, that gender dysphoria is most likely determined multifactorially, in clinical practice an extensive work-up weighing various symptoms and evaluating all kinds of potentially relevant factors seems indicated.

Perspective of Developmental Trajectories

In the diagnosis and treatment of gender dysphoric children and adolescents, one must take the perspective of development into account. Gender variant behavior and even the wish to be of the other gender can be either a phase or a normal developmental variant without any adverse consequences for a child's current functioning (e.g., Bartlett, Vasey, & Bukowski, 2000). Follow-up studies have demonstrated that only a small proportion of gender dysphoric children become transsexual at a later age, that a much larger proportion have a homosexual sexual orientation without any gender dysphoria, and that a small proportion of these children develop into heterosexual adults. The proportions of persistence found in the initial studies were below 10% (for a review of the literature, see Zucker & Bradley, 1995). More recent studies show a variation from 12 to 27% (Cohen-Kettenis, 2001; Drummond, Bradley, Peterson-Badali, & Zucker, 2008; Wallien & Cohen-Kettenis, 2008). It is important to note that these figures are for children attending a gender identity clinic; in a study on children from the general population, these numbers were different. Adults, whose parents had indicated that their children either showed gender variant behavior or expressed the wish to

be of the other gender during childhood, more frequently indicated that they were either homosexual or bisexual, but none of them was transsexual (Steensma, van der Ende, Verhulst, & Cohen-Kettenis, in press). This implies that gender variant children, even those who meet the criteria for GID prior to puberty, for the most part are not gender dysphoric at a later age. To date, we do not yet know exactly when and how gender dysphoria disappears or desists. Clinical experience has shown that this most often takes place right before or right after the onset of puberty. This is also confirmed by youths in a qualitative study in whom the gender dysphoria disappeared after puberty (Steensma, Biemond, de Boer, & Cohen-Kettenis, 2011).

In contrast to what happens in children, gender dysphoria rarely changes or desists in adolescents who had been gender dysphoric since childhood and remained so after puberty (Cohen-Kettenis & Pfäfflin, 2003; Zucker, 2006). Youths who began the reversible treatment with puberty suppression at an average age of 14.75 years, to enable them to explore their gender dysphoria and treatment wish, were still gender dysphoric nearly two years later. All started with the first steps of their actual gender reassignment trajectory, the cross-sex hormones (de Vries, Steensma, Doreleijers, & Cohen-Kettenis, 2011).

CHILDREN

Diagnosis

In the Amsterdam gender identity clinic, several sessions spread out over a longer period of time are allotted to prepubertal children below age 12 for diagnosis. This is done to gain insight into how the gender dysphoria develops over time. The children and their parents are seen at least once together, each of the parents is interviewed individually, and the child is observed a number of times and subjected to an extensive psychodiagnostic assessment. The procedure is concluded with an advisory consultation.

One aim of the examination is to determine whether the criteria for a GID diagnosis have been met. This can be rather simple with children demonstrating an extreme degree of gender dysphoria or who are very explicit in their desire for gender reassignment. However, the clinical picture is not always that clear. Gender dysphoria is a dimensional phenomenon and can exist to a greater or lesser degree. This is something to be taken into greater account in *DSM-5* (APA, for proposed revision see www.dsm5.org) than is presently the case (Zucker, 2010). In addition, it can also manifest itself in various ways. One child with a strong gender dysphoric feeling may be very sensitive to his or her surroundings and only dares to come out at certain times and under certain circumstances. In another child, we can see very openly expressed gender dysphoria (Meyer-Bahlburg, 2002). In other cases, a child can show gender variant behavior without suffering from

actual gender dysphoria. In those cases, the reason for referral usually lies more in the environment (e.g., parents struggling with their child's behavior) than in the child.

All kinds of aspects of the children's functioning are subsequently evaluated, such as their cognitive level, psychosocial functioning, and scholastic performance. For example, a boy may like playing with girls, not because he is unhappy being a boy, but because he has difficulty joining in with other boys of his age due to limited cognitive faculties and immaturity. Any other possible psychopathology is dealt with extensively (Wallien, Swaab, & Cohen-Kettenis, 2007). If any is found, the possible relationship between the gender dysphoria and other diagnoses is investigated. In this way, for example, one can investigate whether an autistic boy's fascination for fancy dresses and long hair is more part of his autism or whether his autism reinforces certain aspects of his gender dysphoria (de Vries, Noens, Cohen-Kettenis, van Berckelaer-Onnes, & Doreleijers, 2010). Some psychiatric diagnoses may be unrelated to the gender presentation but still need attention (e.g., tic disorders). There are also problems or psychiatric disorders that can arise as a consequence of the gender dysphoria (social anxiety, depression, oppositional defiant disorders).

Furthermore, a good assessment of family functioning as well as the role of the child's gender variant behavior on family functioning is useful in order to gain a complete clinical picture.

Treatment

The Dutch approach to clinical management of children with GID contains elements of a therapeutic approach but is not directed at the gender dysphoria itself. Instead, it focuses on its concomitant emotional and behavioral and family problems that may or may not have an impact on the child's gender dysphoria.

PARENT COUNSELING

After the evaluation described above, the results of the assessment and diagnostic procedure are discussed with the parents (and partially with the child) and an ensuing individual recommendation is given. For children in whom no concomitant problems have been observed, who have sensitive parents with an appropriate style of child rearing, advice aimed at dealing with the gender dysphoria is sufficient. This sometimes results in more counseling at a later point in time when the family again needs support or advice or finds it increasingly difficult to deal with the uncertainties with regard to the child's psychosexual outcome. Because most gender dysphoric children will not remain gender dysphoric through adolescence (Wallien & Cohen-Kettenis, 2008), we recommend that young children not yet make a complete social

transition (different clothing, a different given name, referring to a boy as “her” instead of “him”) before the very early stages of puberty. In making this recommendation, we aim to prevent youths with nonpersisting gender dysphoria from having to make a complex change back to the role of their natal gender (Steensma & Cohen-Kettenis, 2011). In a qualitative follow-up study, several youths indicated how difficult it was for them to realize that they no longer wanted to live in the role of the other gender and to make this clear to the people around them (Steensma, Biemond, et al., 2011). These children never even officially transitioned but just were considered by everyone around them as belonging to the other (non-natal) gender. One may wonder how difficult it would be for children living already for years in an environment where no one (except for the family) is aware of the child’s natal sex to make a change back. Another reason we recommend against early transitions is that some children who have done so (sometimes as preschoolers) barely realize that they are of the other natal sex. They develop a sense of reality so different from their physical reality that acceptance of the multiple and protracted treatments they will later need is made unnecessarily difficult. Parents, too, who go along with this, often do not realize that they contribute to their child’s lack of awareness of these consequences.

Parents are furthermore advised to encourage their child, if possible, to stay in contact with children and adult role models of their natal sex as well. Moreover, we advise them to encourage a wider range of interests in objects and activities that go with the natal sex. Gender variant behavior, however, is not prohibited. By informing parents about the various psychosexual trajectories, we want them to succeed in finding a sensible middle of the road approach between an accepting and supportive attitude toward their child’s gender dysphoria, while at the same time protecting their child against any negative reactions from others and remaining realistic about the actual situation. If they speak about their natal son as being a girl with a penis, we stress that they have a male child who very much wants to be a girl, but will need an invasive treatment to align his body with his identity if this desire does not remit. Finding the right balance is essential for parents and clinicians because gender variant children are highly vulnerable to developing a negative sense of self (Yunger, Carver, & Perry, 2004). This goes especially for situations of social exclusion or teasing and bullying (Cohen-Kettenis, Owen, et al., 2003). Fortunately, social exclusion does not invariably take place, as can be seen from a recent study of gender dysphoric Dutch children (Wallien, Veenstra, Kreukels, & Cohen-Kettenis, 2010).

Parents can play a significant role in creating an environment in which their child can grow up safely and develop optimally. In this regard, it is also important that appropriate limit setting is part of the parent’s style of raising their child. For example, if a young boy likes to wear dresses in a neighborhood in which aggression can be expected, they could come to an

understanding with their son that he only wears dresses at home. In such a case, it is crucial that the parents give their child a clear explanation of why they have made their choices and that this does not mean that they themselves do not accept the cross-dressing. The child will, thus, sometimes be frustrated and learn that not all of one's desires will be met. The latter is an important lesson for any child, but even more so for children who will have a gender reassignment later in life. Although hormones and surgery effectively make the gender dysphoria disappear (Murad et al., 2010), someone's deepest desire or fantasy to have been born in the body of the other gender will never be completely fulfilled.

TREATMENT OF NON-GENDER DYSPHORIA RELATED PROBLEMS

If concomitant problems are observed (e.g., substantial problems with peers, psychiatric problems, or conflicts with parents or siblings), the child may be referred to a local mental health agency. The primary aim is for the child and, if necessary, the family to function better. If these problems have contributed to causing or keeping up some gender dysphoria, the dysphoria will likely disappear by tackling these other problems. Although there is little evidence that psychotherapeutic interventions can eliminate gender dysphoria in general, it is conceivable that in some cases gender variant behavior can change as a result of therapy. In our own practice, a reduction or disappearance of gender variant behavior seems to take place particularly when this behavior appeared to be a clear reaction to certain events or situations which in themselves are amenable to therapy (e.g., a boy suddenly dressing up and saying he wants to be a girl as an expression of extreme jealousy after the birth of a younger sister). There are, however, no controlled studies that have investigated psychological interventions aimed at influencing certain types of gender dysphoria. It remains for the most part unclear if "treated" children have been "cured" through interventions or just "grew out of" their gender variance. Yet, even if there is no change in the gender dysphoria, many children with gender dysphoria can benefit from psychotherapy or counseling aimed at securing a positive self-image or dealing with negative reactions from others. Without such support, these children run the risk of developing social relationship problems, emotional problems such as anxiety and depression, behavioral problems, or problems at school due to difficulties with concentration, or a low self-esteem.

PHYSICAL MEDICAL INTERVENTIONS

The Amsterdam gender identity clinic does not provide any physical medical interventions before puberty. Parents are advised to adopt an attitude of watchful waiting. Not until the child arrives at puberty and is still gender

dysphoric will he or she be seen again in our gender identity clinic. Parents and child are informed about this possibility.

ADOLESCENTS

Diagnosis

In nearly all cases seen, adolescents age 12 and up come to the Amsterdam gender identity clinic with a desire for gender reassignment. While gender dysphoric feelings in younger children will usually remit, in adolescents this is rarely the case. Similar to the children, a diagnostic trajectory is initiated that is spread out over a longer period of time. Here, too, there is an intake session with the adolescents and their parents, followed by individual talks with the parents and the youths and a psychodiagnostic assessment. Shortly before the start of any physical medical treatment, adolescents will also have a child psychiatric examination by a member of the team other than the diagnostician and a medical screening by the pediatric endocrinologist. Finally, a recommendation concludes the procedure. When an adolescent is considered eligible for puberty suppression, the diagnostic trajectory is extended, as the puberty suppression phase is still considered diagnostic. This medical intervention puts a halt to the development of secondary sex characteristics. It has been used for over 20 years now in the treatment of precocious puberty and there is evidence that gonadal function is reactivated soon after cessation of treatment (Mul & Hughes, 2008).

The Amsterdam gender identity clinic follows the international Standards of Care of the World Professional Association for Transgender Health (WPATH, 2011), which advises that the decision to undergo gender reassignment be taken in several steps. In the *Standards of Care*, the diagnostic phase is followed by the real-life experience stage in which cross-sex hormones are prescribed and, eventually, the subject can undergo gender reassignment surgery.

In developing a rapport with adolescents and their parents, particular attention is paid to obtaining open and nonjudgmental contact with the youths and their parents. Many elements of this are recognizable as the developmental approach described by Di Ceglie (2009). In a number of sessions, the diagnostician tries to gain a picture of the youth's general and psychosexual development. Information is gathered about current functioning, individually, with peers and in the family. As to sexuality, the subjective meaning of dressing up or the type of clothing, sexual experience, sexual behavior and fantasies, sexual orientation and body perception are discussed.

Adolescents are considered eligible for puberty suppression when they are diagnosed with GID, live in a supportive environment and have no serious psychosocial problems interfering with the diagnostic assessment

or treatment (Cohen-Kettenis, Delemarre-van de Waal, & Gooren, 2008; Delemarre-van de Waal & Cohen-Kettenis, 2006). During the diagnostic trajectory, information is obtained from both the adolescents and their parents to assess whether the adolescents meet the eligibility criteria. Therefore, first it is ascertained whether adolescents are suffering from a very early onset gender dysphoria that has increased around puberty, or whether something else brought them to the clinic (e.g., confusion about homosexuality or transvestic fetishism). About one quarter of the referrals in Amsterdam do not fulfill diagnostic criteria for GID and most of them drop out early in the diagnostic procedure for this reason or because other problems are prominent (de Vries, et al., 2011). Second, the youth's further general and psychological functioning is assessed. Are there psychiatric problems or other issues that could hinder a correct assessment or future treatment compliance? Third, an assessment is made of the adolescent's social support. As puberty suppression and subsequent hormone treatment and surgery have far-reaching implications, an adolescent needs adequate support.

The diagnostic stage does not only focus on obtaining information. To prevent unrealistically high expectations from gender reassignment in the future, all the possibilities and impossibilities of the treatment are discussed extensively with the adolescent and the family. Giving such information starts early in the trajectory. Sometimes, the way in which the youth responds to this information is also diagnostically informative.

If the eligibility criteria are met, gonadotropin releasing hormone analogues (GnRHa) to suppress puberty are prescribed when the youth has reached Tanner stage 2–3 of puberty (Delemarre-van de Waal & Cohen-Kettenis, 2006); this means that puberty has just begun. The reason for this is that we assume that experiencing one's own puberty is diagnostically useful because right at the onset of puberty it becomes clear whether the gender dysphoria will desist or persist. Starting around Tanner stages 2–3, the very first physical changes are still reversible (Delemarre-van de Waal & Cohen-Kettenis, 2006). Because the protocol for young adolescents had started in a period when there were no studies on the effects of puberty suppression, the age limit was set at 12 years because some cognitive and emotional maturation is desirable when starting these physical medical interventions. Further, Dutch adolescents are legally partly competent to make a medical decision together with their parent's consent at age 12. It is, however, conceivable that when more information about the safety of early hormone treatment becomes available, the age limit may be further adjusted (de Vries, 2010).

Treatment

When it appears from the advisory consultation that there are concomitant psychiatric or family problems, some form of psychological treatment will be sought. This treatment is usually given close to the youth's home rather

than at our clinic. Certainly, when the problems are destabilizing and there is an insufficient guarantee that the youth is committed to the therapeutic relationship necessary for a physical medical intervention, the treatment will be postponed. In a study investigating the extent of psychiatric problems in gender dysphoric adolescents, it appeared that the diagnostic stage in some cases may take more than one and a half years before physical medical intervention actually can begin (de Vries, Doreleijers, et al., 2011). This was the case in about one third of the youths with a GID diagnosis. These youths more frequently suffered from an oppositional defiant behavioral disorder or more than three psychiatric diagnoses (in addition to the GID diagnosis) compared with adolescents who were considered immediately eligible. They also were less likely to live with both biological parents and on average had a lower intelligence. Furthermore, they were, on average, older at the time of referral (de Vries, Doreleijers, et al., 2011). Clearly, psychiatric problems were not the only factor influencing the delay in starting puberty suppression.

However, for many of the gender dysphoric youths, there are no psychological problems other than the gender dysphoria. Yet, these adolescents do need good counseling. Some themes need repeatedly to be touched upon, because they gain a new dimension as the adolescents grow older, for example, dating when you have a body that has not yet been operated on, or infertility. Regular contact with the psychologist is also necessary for adequate preparation for the next treatment steps. An increasing problem is that many adolescents do not realize that an unhealthy lifestyle (smoking, obesity) has a negative influence on the treatment, surgery in particular. In addition to a preparation for the future, some profit from a form of psychotherapy. This may be because they are anxious, need to become more assertive or feel insecure. For those who do not easily verbalize their concerns, psychomotor therapy can be helpful to let them feel more at ease with their bodies and to learn to talk more easily about their problems.

TRANSITIONING

Many gender dysphoric youths choose to begin living in the desired gender role simultaneously with the beginning of puberty suppression. The adolescents and their families are then supported in this process so that it can be achieved successfully. Many youths also obtain help from Transvisie, the only self-help organization working with trans youth in the Netherlands. It is, however, not a requirement to begin with the real life experience as long as cross-sex hormones are not taken.

PHYSICAL MEDICAL INTERVENTIONS

Physical medical interventions can be divided into completely reversible interventions (puberty suppressors such as GnRHa), partially reversible

interventions (cross-sex hormones) and completely irreversible gender reassignment surgery (WPATH, 2011).

Completely reversible interventions. Puberty suppression has two aims. First and foremost, they offer the adolescent time to smoothly explore his or her gender identity and to find out if a gender reassignment trajectory is really what the youth wants. Moreover, the knowledge that their bodies in this stage will not continue to develop in the undesired direction often results in a vast reduction of the distress they have been suffering from since the onset of puberty. Second, stopping the development of secondary sex characteristics makes passing in the desired gender role easier than delaying treatment until adulthood. This entails advantages for functioning throughout one's life (Ross & Need, 1989). The team's view that puberty suppression does not automatically have to lead to actual treatment (gender reassignment) is explicitly discussed with the youths and their parents. While with some adolescents it is clear early on that there is only a very small chance that they will abandon this trajectory, they still have to see their psychologist or psychiatrist regularly in the years that they are on GnRHa or cross-sex hormones. Each adolescent is also regularly given consideration in the weekly multidisciplinary conferences in which the pediatric endocrinologist also participates. As soon as necessary, extra help is deployed or the trajectory is adjusted.

Youths with psychiatric or family problems can also become eligible for puberty suppression if the mental health treatment they receive is adequate enough to ensure that the diagnostic or treatment process is not unduly disturbed. To achieve this, good, regular contact with their external therapists or counselors is necessary. Special attention is given to gender dysphoric adolescents with an autism spectrum disorder. It is certainly the case for them that the treatment has to be introduced calmly and each step must take place in close consultation with the other mental health clinicians (de Vries, Noens, et al., 2010).

Partially irreversible interventions. Gender dysphoric adolescents are eligible for the first step of the actual gender reassignment when they have reached the age of 16. This age has been chosen because in the Netherlands (as well as in many other countries), young people are then considered to be able to make independent medical decisions. While their parents do not have to approve, the Amsterdam clinic prefers their approval, as most adolescents are still very much dependent on their caretakers. Furthermore, adolescents have to meet the same criteria as at the onset of puberty suppression (except for the Tanner stage criterion). Although most of the youths will have already made a social transition, this is now a requirement because sex characteristics of the desired gender will become visible to others.

Cross-sex hormones will result in a start of puberty of the desired gender. Male-to-females (MTF) or trans girls receive estrogens which result in breast growth and female fat distribution. Female-to-males (FTM) or trans boys receive androgens, and will become more muscular and develop

a low voice and facial-and body hair growth (Delemarre-van de Waal & Cohen-Kettenis, 2006).

In addition, new themes will be brought up in sessions. In this stage, some of the youths will start going out with someone for the first time and they will be more consciously dealing with dating, romantic relationships, partner choice, careers, and having children. Because the operations suddenly seem to be close at hand, the possibilities and limitations of the gender reassignment surgery, about which they will gradually have to make choices (e.g., various types of metoidioplasty or phalloplasty, or no genital surgery for trans boys), are once again discussed (Cohen-Kettenis, 2006).

Completely irreversible interventions. When the adolescent has come of age at 18 and still meets all the eligibility criteria, he or she can be eligible for the last step of the gender reassignment treatment trajectory, the gender reassignment surgeries. Trans boys may undergo several operations: (if they came relatively late to the clinic and already had some breast development) mastectomy, hysterectomy or ovariectomy, and, if desired, genital operations (metoidioplasty or phalloplasty). Trans girls usually undergo vaginoplasty and, if necessary, at their own financial expense, augmentation mammoplasty. Trans girls who began puberty suppression at a young age often have insufficient penile skin for a classical vaginoplasty and need an adjusted surgical procedure using colon tissue.

TREATMENT EVALUATION

While there are still reservations about physical medical interventions in youths under the age of 18 (e.g., Korte et al., 2008; Meyenburg, 1999; Viner, Brain, Carmichael, & Di Ceglie, 2005), many clinicians are changing their views on this (Cohen-Kettenis, Delemarre-van de Waal, & Gooren, 2008). There are indications that starting cross-sex hormones early (under 18 but over 16 years of age) followed by gender reassignment surgery at 18 can be effective and positive for general and mental functioning (Cohen-Kettenis & van Goozen, 1997; Smith, van Goozen, & Cohen-Kettenis, 2001; Smith, van Goozen, Kuiper, & Cohen-Kettenis, 2005).

By now, two studies have been performed evaluating the effects of puberty suppression. Psychological functioning of the first 70 gender dysphoric adolescents eligible for puberty suppression was measured twice: at their attendance at the clinic and shortly before the start of cross-sex hormones. Their behavioral and emotional problems and depressive symptoms decreased, while general functioning as measured by the Global Assessment Scale (Shaffer et al., 1983) improved significantly during puberty suppression. No adolescent withdrew from puberty suppression and all started cross-sex hormone treatment, the first step of the actual gender reassignment (de Vries, Steensma, Doreleijers, et al., 2010). A second group, assessed postoperatively, appeared to be satisfied with their lives and no longer

gender dysphoric (de Vries, 2010). Many studies in gender dysphoric adults have demonstrated that gender reassignment treatment is effective. These initial results demonstrate that this is also the case in young people who have received GnRHa to suppress puberty at an early age, followed by the actual gender reassignment (de Vries, 2010).

The concern that early physical medical intervention has unfavorable physical effects has to this date not been confirmed (Delemarre-van de Waal & Cohen-Kettenis, 2006). Initial studies on, for example, bone development and insulin sensitivity demonstrate favorable results (Schagen et al., in press; Vance, et al., in press).

SUMMARY AND CONCLUSIONS

At the Amsterdam gender identity clinic the clinical approach to prepubertal children under the age of 12 is different from the approach to adolescents starting at age 12. In children, the diagnosis is focused on elucidating all possible factors that could play a role in gender dysphoria, but the gender dysphoria itself is not actively dealt with in treatment. A general recommendation is given not to have transitioning take place too early, but to carefully observe how the gender dysphoria develops in the first stages of puberty. Parents and child are supported in tolerating the uncertainty about the outcome. Of special concern are concomitant problems and, whenever present, necessary help is actively sought so that the child can develop in an optimal way.

Gender dysphoric adolescents who have reached puberty also undergo meticulous diagnosis, but, in contrast to prepubertal children, they can be considered eligible for physical medical interventions under strict conditions. This does not, however, rule out parallel psychotherapy or other psychological interventions. Any vulnerable aspects of the youth's functioning or circumstances deserve thorough concern. These need not be contraindications to physical medical interventions, but they do need due attention. Using an approach that cares for every aspect of the adolescent's psychosocial functioning and not only aims at eliminating the gender dysphoria, we try to provide the future young adult with the necessary resources for an optimal psychological development and a good quality of life. Despite the understandable concern about potential harm that could be done by early physical medical interventions, it seems currently that withholding intervention is even more harmful for the adolescents' wellbeing during adolescence and in adulthood. It is fortunate that nearly all diagnostic and treatment aspects, except for breast enlargement, are covered by insurance. Transgender individuals in the Netherlands do not need to suffer from incomplete or inadequate treatment because of financial problems.

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