Reproductive wish in transsexual men

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BACKGROUND: Hormonal therapy and sex reassignment surgery (SRS) in transsexual persons lead to an irreversible loss of their reproductive potential. The current and future technologies could create the possibility for female-to-male transsexual persons (transsexual men) to have genetically related children. However, little is known about this topic. The aim of this study is to provide information on the reproductive wishes of transsexual men after SRS.

METHODS: A self-constructed questionnaire was presented to 50 transsexual men in a single-center study.

RESULTS: The majority (64%) of transsexual men were currently involved in a relationship. Eleven participants (22.0%) reported having children. For eight participants, their female partner was inseminated with donor sperm, whereas three participants gave birth before hormonal therapy and SRS. At the time of interview, more than half of the participants desired to have children (54%). There were 18 participants (37.5%) who reported that they had considered freezing their germ cells, if this technique would have been available previously. Participants without children at the time of investigation expressed this desire more often than participants with children (χ² test: P = 0.006).

CONCLUSIONS: Our data reveal that the majority of transsexual men desire to have children. Therefore, more attention should be paid to this topic during the diagnostic phase of transition and to the consequences for genetic parenthood after starting sex reassignment therapy.

Key words: gender identity disorder / transsexualism / gamete preservation / reproductive wish

Introduction

Since the international publicity on the pregnancies of a female-to-male transsexual person (Trebay, 2008), interest in reproductive issues in transsexual persons has flared up (Álvarez-Díaz, 2009; Murphy, 2010). Transsexualism (gender identity disorder) is a condition in which a person experiences discrepancy between the sex assigned at birth and the gender he/she identifies with, often leading to extensive personal distress. In our center, female-to-male transsexual persons, denoted transsexual men, are treated in a multidisciplinary approach consisting of testosterone replacement and sex reassignment surgery (SRS). SRS in transsexual men includes mastectomy and hysterectomy combined with bilateral oophorectomy. Due to the extensive experience in phalloplasty (creation of a full-sized phallus) at our center, most transsexual men proceed with a phalloplasty and less frequently with metaiodioplasty (creation of a microphallus by surgical enhancement of the androgen-dependent hypertrophy of the clitoris) (Monstrey et al., 2005). Both procedures are usually combined with vaginectomy and scrotoplasty (Selvaggi et al., 2008).

Hysterectomy and bilateral oophorectomy lead to an irreversible loss of natural reproductive capacity in transsexual men. However, the current and future reproductive techniques could offer transsexual men the possibility to have children of their own (De Sutter, 2001). Currently, transsexual men can undergo hormonal stimulation and consequently oocyte retrieval followed by oocyte cryopreservation (of course before SRS). The oocytes can be fertilized by donor or partner sperm, depending on the existence of a relationship and on the sexual orientation, and afterwards implanted in a female partner or a surrogate mother. However, hormonal stimulation and oocyte retrieval can be an unwanted procedure for many transsexual men, limiting their current reproductive options. In the future, ovarian tissue cryopreservation might solve this issue: with this technique, ovarian tissue can be obtained at the time of SRS and stored for future use (De Sutter, 2009). Apparently, androgen treatment does not deplete the primordial follicles nor does it affect the development of the follicles (Van den Broecke et al., 2001). However, autotransplantation of ovarian tissue in transsexual men is not possible and the results of in vitro maturation of follicles/oocytes derived from...
ovarian tissue fragments, followed by IVF in humans, are still unsatisfactory. Therefore, much research is needed to put these techniques into practice for transsexual men, regardless of the ethical considerations.

Unlike in many European countries, hysterectomy and oophorectomy are not necessary for legal sex reassignment in the USA. As a result, some transsexual men do not opt for this surgery and are still able to give birth themselves. Thomas Beatie, a transsexual man from the USA, decided to become pregnant himself to fulfill the couple’s wish for children due to fertility problems of his wife. After interruption of testosterone treatment, he conceived thrice with donor sperm and gestated three pregnancies (Trebay, 2008). However, many concerns can be raised regarding the pregnancies of transsexual men, and to date, no guidelines are available on this particular matter.

Although the World Professional Association for Transgender Health (WPATH) Standards of Care (Meyer et al., 2001) and the Clinical practice guidelines of the Endocrine Society (Hembree et al., 2009) clearly state that transsexual persons should be encouraged to consider fertility issues before starting cross-gender hormonal treatment, many medical experts remain critical on the ethical aspects of possible procreation after sex reassignment. Yet, the majority of transsexual men are of reproductive age at the moment of transition (Kreukels et al., 2010) and have relationships following transition (De Cuypere et al., 2005; Wierckx et al., 2011a,b). Consequently, as any other couple, they might desire to have children. In an internet survey in 121 transsexual women, 40% of the participants expressed this desire, even if they already had children (De Sutter et al., 2002).

The objective of the current cross-sectional study was to provide single-center data on reproductive wishes of transsexual men after SRS, as this has not yet been addressed in the medical literature.

Materials and Methods

Study population

All Dutch-speaking transsexual men who underwent SRS between 1987 and 2009 at the Ghent University Hospital (Belgium) \((n = 79)\) were invited by letter to confirm their willingness to participate by telephone or electronic mail. Two participants could not be reached due to change of address. A total number of 47 persons agreed to participate in this study, resulting in a response rate of 64%. Three participants, who were not treated in our center but were introduced by others, offered to participate in the study as well, resulting in a final study sample of 50.

Study procedures

Transsexual men who agreed to participate in the study received questionnaires on quality of life (QOL), sexual functioning, fertility wish, dermatologic results, voice, surgical results, psychological functioning and medical history by regular mail. Subsequently, they visited the Ghent University Hospital between November 2009 and April 2010 for further evaluation. The 1-day visit included a fasting morning blood sample and dermatologic, urologic, speech, bone and body composition evaluations. These data are reported in other publications (Wierckx et al., 2011a,b). This study complied with the recommendations of The Declaration of Helsinki and was approved by the Ethics Committee of the Ghent University Hospital. We only included participants who underwent SRS (mastectomy, hysterectomy and bilateral oophorectomy) at least 1 year before this study, as we were mainly interested in reproductive problems in transsexual men after transition, when the majority have settled in stable relationships and when a more realistic picture on long-term emotional stability and psychological functioning can be expected (De Cuypere et al., 2005).

Measures

Relationship and reproduction parameters

A self-constructed questionnaire concerning relationship and reproduction was completed. Participants reported on the following topics: sexual orientation before and after SRS, marital status, gender of partner, duration of relationship, whether they had children and how they were conceived, number of children, desire to have (more) children, consideration of freezing of germ cells during transition at the time of starting cross-sex therapy and consideration of freezing of germ cells during transition if the technique would have been available.

Quality of life

QOL was measured using the Dutch version of the short form-36 Health survey (SF-36). This questionnaire contains 36 questions with fixed response choices, organized into eight scaled scores, based on interval scores in the sections. These scores were converted into a 0–100 summary score for each section: vitality, physical functioning, bodily pain, general health, physical role functioning, emotional role functioning, social role functioning and mental health, with higher scores indicating higher levels of well-being (Ware et al., 1993, 1994). Internal consistency with the SF-36 was high (Cronbach’s \(\alpha = 0.81\)).

Statistical analysis

The normal distribution of all variables was tested by the Kolmogorov–Smirnov one-sample test. Variables with a normal distribution were described in terms of mean and standard deviation (SD) and skewed variables were described in terms of median, and first and third quartiles. For categorical variables, differences were calculated with \(\chi^2\) tests if conditions were met, and with the Fisher exact tests otherwise. Differences between two groups were tested with an independent Student t-test if parametrically distributed, and with a Mann–Whitney test in the case of non-parametric distribution. Multiple regression analysis was used to assess associations between QOL parameters and having children. We adjusted for the effect of age and relationship status. Internal consistency within a set of items was assessed through Cronbach’s \(\alpha\) metric. PASW 18.0 software package (SPSS Inc., Chicago, IL, USA) was used. A \(P\)-value of \(<0.05\) was considered to indicate statistical significance; all \(P\)-values were two-tailed.

Results

Patient characteristics

General characteristics are summarized in Table I.

Relationship and reproduction parameters

Data on relationship and reproduction characteristics are summarized in Table II.

Most participants (86.0%) were (mainly) attracted to females, two were equally attracted to males as females, whereas five were (mainly) attracted to males. Two participants, who reported to be bisexual before SRS, mentioned currently being attracted exclusively to females.
The majority of transsexual men (64.0%) were involved in a stable relationship at the time of interview, with a mean duration of the relationship of 9 years. Most of them had a female partner (90.6%). One participant had a relationship with a biological man, whereas two were in a relationship with a male-to-female transsexual person. Eleven transsexual men (22.0%) mentioned having children: six participants had one child, two participants had two children and three participants had three children. For eight participants, their female partner was inseminated with donor sperm, whereas three participants gave birth themselves before hormonal therapy and phalloplasty.

SRS. Two of those three participants who gave birth themselves experienced this as (very) problematic, while one participant found this experience very pleasant.

Transsexual men with children scored significantly better on self-perceived mental health status and vitality, after correction for relationship status and age (Table III).

More than half of the participants (54.0%) had a current desire to have children, while an additional 8.0% had experienced this desire in the past. The wish to parent children was unrelated to the current presence of children (Fisher’s exact, \( P = 0.48 \)). No differences in the desire for children were observed for age or for time since SRS (Student’s t-test: \( P = 0.58 \) and 0.88, respectively). Social and mental health were also not associated with age nor with time since SRS (Mann–Whitney’s test: \( P = 0.98 \) and 0.63; Mann–Whitney’s test: \( P = 0.51 \) and 0.074).

Participants who were attracted to men showed less desire for children (40%) than those (mainly) attracted to females (55.0%). The group of transsexual men attracted to men was too small \( (n = 5) \) to perform statistical tests.

At the time of cross-sex hormone therapy, the vast majority of transsexual men (77.1%) had not considered freezing their germ cells. Nine participants had considered it, but had never talked to a health-care provider about this subject. No difference in age was observed between those two groups (Student’s t-test: \( P = 0.96 \)). Two participants had considered freezing their germ cells, but it was technically not possible at the time.

There were 18 transsexual men who mentioned that they would have considered freezing their germ cells, if this technique would have been available at the time of cross-sex therapy. This wish was significantly more present in participants without children compared with participants with children (\( \chi^2 \) test: \( P = 0.006 \)). None of the...
participants with children mentioned that they would have considered freezing their germ cells at the time of cross-sex therapy, even if this technique would have been available.

**Discussion**

To our knowledge, this is the first study that addresses the desire for children of a fairly large number of transsexual men. More than half of the participants mentioned the desire to have children. However, a shortcoming of the study is that we did not explore to which degree the child wish in our participants reflected a wish to genetically procreate or a wish for parenthood alone.

Participants with children did not differ in the desire to have (more) children from participants without children. This is in accordance with De Sutter et al. (2002) who found no differences in the desire to have children between transsexual women with or without children. It seems that many transsexual men and women do not exclude the desire to have a(nother) child after SRS. Also, the large differences in age and number of post-operative years in our participants did not seem to affect the desire to have children. Similarly, no associations were found between social or mental functioning on one hand and number of post-operative years and age on the other hand. A possible explanation might be that all but one participant underwent SRS at least 2 years before inclusion in this study, so that a realistic picture on long-term functioning was created and experienced. Participants who were (mainly) attracted to women seemed to have a higher desire to have children in comparison with those attracted to men, though the latter group was rather small (n = 5). However, it could be that transsexual men attracted to men have a similar desire as observed in a large sample of Flemish homosexual men (Vincke et al., 2006).

At the time of the interview, 22 participants had children. Interestingly, the majority were conceived by donor sperm insemination of their female partner. This is in contrast to transsexual women, who mostly had children before SRS, especially when they had a late transition (De Sutter et al., 2002). The vast majority of transsexual men are diagnosed with an early-onset gender identity disorder in contrast to transsexual women in whom the number of early and late onset of gender identity disorder is comparable (Nieder et al., 2011). Moreover, the age of SRS is significantly lower in transsexual men (mean age 28) compared with transsexual women (mean age 35.5) (Kreukels et al., 2010). This could explain why few transsexual men had children before SRS.

Interestingly, participants with children scored significantly better on mental health and vitality scores than participants without children. The question presents itself whether having children increases the mental well-being of transsexual men or that transsexual men with a good mental well-being have more children. Furthermore, this association was independent of the current age of the participants, which suggests that having a child is associated with a better mental well-being at any age.

However, reproduction is not only about satisfying the wish of the parents. Parenting by transsexual persons raises many ethical questions. The first question obviously concerns the acceptability of their child wish. However, the right to reproduce is recognized as a human right. As a consequence, the burden of proof is on those who want to deny this right to certain groups of persons. Moreover, the practice and development of medically assisted reproduction as a field of medicine shows that the wish to have a genetically related child is also recognized in general. This does not imply, however, that professionals should treat anyone who asks for a child. The primordial criterion is the welfare of the future child. At present, there are no indications that having a transsexual parent harms in any way the child growing up in such family (Green, 1978; White and Ettner, 2004; White and Ettner, 2007). It has to be said though that very little research has been done on this point. As mentioned above, the burden of proof is on the opponents and the absence of reassuring evidence cannot be taken as evidence against. Moreover, even if children may encounter difficulties as a consequence of the family setting, that does not automatically mean that reproduction in this family setting is ethically unacceptable (Pennings, 2011).

During the transition period in which evidence is gathered, one should look at situations that are similar in some aspects. The only unique aspect of this group is the gender transition of one of the parents. All other elements (same sex parenthood, use of donor gametes, social stigma etc.) can be found in other groups of parents. Nevertheless, a combination of several risk factors may complicate things. For instance, parents will not only have to consider secrecy of the gender transition itself but also of the use of donor gametes. When looking at the general functioning of such families, one should distinguish between families in which the gender transition of a parent took place before birth and those where a parent changes gender during the life of the child.

The vast majority of transsexual men had not considered freezing their germ cells at the time of cross-sex hormone therapy. Although 20% had considered it, they had never talked to a health-care provider about this subject. This suggests that fertility issues were not sufficiently addressed in the past. Currently, the available guidelines (Hembree et al., 2009) state that all referred subjects who satisfy eligibility and readiness criteria for endocrine treatment should be counseled about the effects of hormone treatment on fertility and about the available options that may enhance the chances of future fertility. The option of freezing gametes also demands complicated decisions to be made. Although some procedures may be easier to decide than for other patients (when oophorectomy will be performed as part of the SRS, ovarian tissue freezing is easier to justify), other elements may be more difficult. Should, for instance, oocytes be frozen from a transsexual man when he enters in a relationship with a woman? Many clinics refuse to exchange oocytes between lesbians when the woman who will become pregnant is fertile because they judge this as a social indication not worth the medical investment (Dondorp et al., 2011). The situation of transsexual men may be considered as similar. Such requests should be carefully counseled beforehand and the fertility center should announce its policy in these matters. Moreover, as for all applications of fertility preservation, the freezing decision should be separated from the decision about the later use. Patients should be made aware of this too.

In conclusion, our data reveal that the majority of transsexual men desire to have children. Therefore, during the phase of transition, this topic should be included in the work-up and possible interventions should be discussed.
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Authors’ roles


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Conflict of interest

None declared.

References


