Intrafamilial sperm donation: ethical questions and concerns

Nikos Nikolettos¹,²,³, Byron Asimakopoulos² and Ilias Hatzissabas¹

¹Center for Reproductive Medicine of Thrace, 18 Ionos Dragoumi str., 681 00 and ²Laboratory of Reproductive Physiology-IVF, Faculty of Medicine, Democritus University of Thrace, Dragana, 681 00 Alexandroupolis, Greece
³To whom correspondence should be addressed. E-mail: nnikolettos@hotmail.com

Sperm donation seems to be the only solution in cases of negative results with testicular sperm extraction (TESE). However, it implies a genetic dissociation between husband and offspring that results in psychological stress, as well as ethical and existential dilemmas for the couple. Facing these dilemmas, some couples prefer father-to-son donation as an alternative solution. However, father-to-son sperm donation involves many potential medical, ethical and emotional risks. A broad discussion within the scientific community on these issues should contribute towards a better approach of these cases.

Key words: ART/ethics/intrafamilial/sperm donation

Introduction

The male factor is a significant cause of human infertility, implicated in most of the cases attending IVF programmes (Edwards and Brody, 1995). In cases of severe non-obstructive azoospermia (NOA), where no spermatozoa are found in the ejaculate, testicular sperm extraction (TESE), combined with ICSI, are the most reliable solutions (Zumbe et al., 1996; Al-Hasani et al., 1999; Küpker et al., 1999). Cryopreservation of testicular tissue obtained by TESE before ovulation induction has many advantages. It allows possibilities for alternative solutions either when there are no sperm in the harvested testicular tissue, or when there are no oocytes available on the day of follicle puncture. Moreover, it is known that frozen–thawed surgically retrieved sperm give satisfactory fertilization rates (Perraguin-Jayot et al., 1997; Al-Hasani et al., 1999). On the other hand, in cases where no sperm can be found in the testis, sperm donation appears to be the only alternative solution.

Sperm donation is one of the oldest and most common procedures in assisted reproduction. Despite the lack of official data, in Greece, more than forty private sperm banks offer cryopreserved sperm for IVF procedures. Donors are required to be anonymous, healthy individuals, <40 years old. Nevertheless, sperm donation entails great psychological implications for the couple, as it raises ethical and existential dilemmas which are difficult to overcome (Klock and Maier, 1991; Klock et al., 1994; Marshall, 1998; David, 2000; McGee et al., 2001; Patrizio et al., 2001). For males especially, sperm donation is hardly an acceptable solution, as there is a complete separation between biological and social filiation (David, 2000). On the other hand, females consider sperm donation a less dramatic separation; the genetic dissociation is partial and the pregnancy creates and maintains a strong biological bond between mother and child (David, 2000). Quite often, couples confronted with such problems and dilemmas become unwilling to receive sperm donation. Another alternative, preferred by a few couples, is father-to-son sperm donation. This type of donation maintains some genetic link and in this way seems to tone down the stresses that these couples face (Marshall, 1998).

Our experiences

In our centre, we experienced two cases of father-to-son sperm donation. In both cases there was a long period of unsuccessful pregnancy attempts due to male factor infertility. In one case, the wife also suffered from polycystic ovary syndrome and had a poor response in previous ICSI cycles. Repeated semen analysis in our centre revealed azoospermia for both husbands. From the beginning the couples were counselled for sperm donation, but insisted on another ICSI cycle combined with TESE, with the hope of success. According to the centre’s policy to dissociate the surgical retrieval of sperm from oocyte harvest and ICSI, TESE were performed before the ovulation induction. The results were negative and included complete absence of even immature forms of sperm. After TESE, the couples were counselled again for sperm donation. Donation from anonymous donors was rejected, but they suggested in turn, sperm donation from the fathers of the husbands. They did not change their decision even when the medical risks and the issue of complicated relationships were brought to their notice. They also refused donation from young relatives. In the first case, the husband’s father age was 65, while in the second case he was 77. Both donors were interviewed and informed of the possible medical risks, as well as the emotional risks for the
offspring due to the complicated relationship status. They avoided any in-depth discussion but clearly declared their consent to donate sperm. After this, the usual screening for gamete donors was performed, including medical history and investigation for HIV, Hepatitis B and C. They were found to be healthy and the quality of their semen was adequate for ICSI. In each case, the wives underwent ovarian stimulation followed by ICSI and transfer of four embryos. In the first case, the wife conceived and delivered triplets, while in the second case, where the wife suffered from polycystic ovary syndrome, there was a biochemical pregnancy.

The motives of recipients and donors
In the above cases, sperm donation was only accepted, after finally realizing that there was no hope of finding sperm in the husbands’ testis, following yet another failure by TESE. From the start, they completely refused anonymous sperm donation. Moreover, not only did they not consent to sperm donation from a young relative, but also insisted on receiving donation from husbands’ fathers, although there were risks for the semen quality because of the age of the donors.

Their choice is hard to explain. The two couples did not easily discuss their thoughts and feelings on these issues during the interviews with the medical doctors or the psychologist. For example, they did not give reasons for their refusal of anonymous donation. The same was also true for the donors and the other family members. The unwillingness for discussion seems to be a common phenomenon in couples receiving gamete donation (Klock and Maier, 1991; Klock et al., 1994; Adair and Purdie, 1996; Brewaeys et al., 1997). As McWhinnie (2001) states... ‘the secrecy is central to these families’ functioning’.

We can approach the couples’ choice of donor by considering the four following reasons: firstly, the origin of gametes was known and the genetic link was maintained. Secondly, there was a strong emotional bond between fathers and sons. Thirdly, the age of fathers seemed to be a determinant factor: An old grandfather could hardly claim the role of the ‘father’ for the prospective offspring. This risk was diminished by his limited life expectancy. Last but not least, the possibility for future negative father-daughter-in-law relations was negligible because of the donor’s age. With father-to-son sperm donation, the couples seemed to secure the future stability of their families.

Questions also arise regarding the motives of the donors—the husbands’ fathers. Both donors refused to discuss these matters during the interviews. Even though all risks were repeatedly explained the donors refused to express their opinions. It seems rational that the two fathers saw the sperm donation as a parental offer; a gift to their sons.

Unfortunately, the views of donors’ wives are not known, as they did not appear during the counselling meetings.

The available literature is very poor regarding intrafamilial sperm donation. Therefore, a discussion on the motives of recipient couples and donors becomes difficult. Similar attitudes have been reported in studies regarding oocyte donation. In a study carried out in the Centre for Reproductive Medicine at the Free University of Brussels, the majority (68.8%) of recipient couples of oocyte donation clearly preferred persons from family and friends as donors (Baetens et al., 2000). Fear associated with the unknown origin of the genetic material and the acquaintance of the donor were the two main reasons for this preference (Baetens et al., 2000). Adair and Purdie (1996), in a study with 46 recipients and donors participating in personal donor programmes, reported that recipients preferred personal donors on the basis of knowing the donor’s background and, for related couples, having a common genetic origin. The similar genetic background appears to be more important for men than women. The genetic/medical background of the donors is reported as a major concern among donor insemination families, too (Klock and Maier, 1991; Klock et al., 1994; Brewaeys et al., 1997).

Potential risks
A number of potential risks arise from intrafamilial sperm donation. The most important are medical and emotional. In the two cases mentioned here, the two donors were healthy, but this is not always possible with persons >60 years of age. Moreover, there is evidence that the advanced male age may affect many sperm parameters. It has been reported that increased age is correlated with decreased semen volume, deteriorations in sperm morphology and sperm motility (Klock et al., 2001). Even when these sperm parameters are considered as normal, as in the two cases presented here, there are concerns for chromosomal abnormalities. A number of studies have shown that increased age is associated with increased sperm aneuploidy (Griffin et al., 1995; Robbins et al., 1995; Bosch et al., 2001). Although there are opposite opinions suggesting that aged men do not have a significantly higher risk of passing chromosomal abnormalities to their offspring (Savage et al., 1998; Luetjens et al., 2002), this issue has to be taken into account. So, special attention has to be given to the health and the semen quality of the donors. But this may not be the most difficult part. We believe that the most serious risks are the emotional and ethical ones. There is a possibility of development of negative relations between the donor and the wife. This possibility is even greater, when a young relative serves as donor. Regarding the offspring, as Marshall (1998) notes, in the case of father-to-son donation, the rearing father is its genetic brother and the rearing grandfather is its genetic father. Of course, we can think of many other complicated situations, when the donor is another relative (brother or nephew of the husband, etc). We simply do not know to what extent these complicated relationships will be accepted by the child. We also do not know the impact of these relationships on the child’s environment, mainly the social one.

The impact of disclosing this information to the offspring is unknown (Marshall, 1998). But it is also true, that most couples who receive gamete donation, prefer to keep this information secret, not only from the offspring, but also from close friends and relatives (Klock and Maier, 1991; Klock et al., 1994; Cook et al., 1995; Brewaeys et al., 1997; Baetens et al., 2000; David, 2000; Gottlieb et al., 2000; Daniels and Thorn, 2001; McGee et al., 2001; Patrizio et al., 2001). Many opinions have been
expressed to explain this attitude: Many infertile couples consider the male’s infertility as a handicap and therefore prefer to keep it secret (Cook et al., 1995). Nondisclosure of gamete donation is a way to maintain the normal bonds between the child and the parents, to avoid distressing the child and to establish a ‘normal’ family (Cook et al., 1995; Frith, 2001). Brewaeys et al. (1997) state that fathers more often than mothers are secretive with regard to the use of a donor and are more in favour of donor anonymity. In cases of intrafamilial sperm donation, where the donor is a close relative, it is possible that all the above considerations are stronger. Another argument is that a child has the right to know her/his origin for ethical and medical reasons. Under what circumstances should nondisclosure prevent the child’s right to know the identity of his biological father? Nondisclosure violates the child’s rights to autonomy. In many cases, nondisclosure creates family tension detectable by the child and the disclosure of the child’s origin either accidentally or intentionally later in life causes distress and challenges the family relationships (McGee et al., 2001; McWhinnie, 2001). However, Brewaeys et al. (1997) found there was no association between secrecy and the emotional or behavioural adjustment of children.

Today, a broad discussion exists on donor anonymity (Cook et al., 1995; Brewaeys et al., 1997; Gottlieb et al., 2000; Daniels and Thorn, 2001; Frith, 2001; McGee et al., 2001; McWhinnie, 2001; Patrizio et al., 2001). Whether children should have access to information about the method of conception, the name of donor and medical information concerning the donor is still a matter of debate. Irrespective of the future conclusions of this discussion, assisted reproduction’s scientists have already gained a valuable profit from it, as they have started focusing not only on the infertility problem itself, but also on the long-term outcome and consequences of assisted reproduction. However, this ongoing discussion has not considered intrafamilial donations.

Lack of law and lack of studies

In the European Union countries and the United States there are no laws or official guidelines on intrafamilial gamete donation, especially on sperm donation from father to son (American Fertility Society, 1993; Ethics Committee of American Society for Reproductive Medicine, 1997, Anonymous, 1998). Moreover, the knowledge of the clinicians on the emerging ethical issues is limited as it is the available bibliography. Under these conditions, the counselling of couples and the decision-making become tough tasks. The role of a psychologist in every IVF team is unquestionably helpful for counselling the couples and reaching a decision (Klock and Maier, 1991; Marshall, 1998). However, in such difficult cases, it is not always sufficient.

We believe that a rational approach of such cases on behalf of the IVF centres should include an extensive discussion on the medical risks and a clear understanding of the complicated relationship between the donor and the offspring. Psychologists should emphasise the right of the offspring to know her/his genetic origin. It is true that it is not always possible to have ‘broad discussions’ with couples and relatives, but it is very crucial to make them aware of all consequences, because only then they make reasonable decisions.

Of course, apart from the couples and the relatives, it remains for society and the scientific community to take a stand on this subject.

Conclusion

Cases of intrafamilial sperm donation, although very rare, demonstrate the ability of reproductive technologies to bring novel alterations in the established family structures. The emotional and ethical issues that may arise are new and possibly very serious. In our view, the scientific community has to open a broad discussion on intrafamilial gamete donation. The exchange of experience and opinions should include not only the medical, but also the ethical, emotional and social implications involved.

References


