

Counselling couples and donors for oocyte donation: the decision to use either known or anonymous oocytes

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In order to avoid a long waiting period, the Centre for Reproductive Medicine of the Free University of Brussels suggests that couples in need of donor oocytes search for a donor among family and friends. Recipient couples can choose between two types of donation: known donation, i.e. treatment with the oocytes of the donor recruited by the couple, or anonymous donation, i.e. an exchange of the donor recruited by the couple with a donor recruited by another couple in order to ensure anonymity between donor and recipients. In total, 144 couples were counselled by a psychologist in the decision-making process with regard to the kind of donation to be used. Some 68.8% of the recipient couples preferred known donation. This choice was mainly motivated by reasons related to fears associated with anonymity, such as fear of the unknown origin of genetic material and the trust that couples had in 'their' donor. Almost one-third of the couples opted to use anonymous oocytes. The desire to establish explicit boundaries between the two families involved was the major motivation for this choice. Approximately 44% of the couples were willing to tell the child about the oocyte donation.

Key words: counselling/oocyte donation/secretcy

Introduction

Oocyte donation has been made possible as a result of in-vitro fertilization (IVF). Oocyte donation involves two women: the donor and the woman who wishes to be pregnant. The treatment provides an answer for infertile women with ovarian problems, such as primary or premature ovarian failure. In addition, women with normal ovarian function may require oocyte donation, in cases of recurrent failure of IVF treatment (Robertson, 1989). Some of these problems are age-related. In the Centre for Reproductive Medicine of the Free University of Brussels, women aged over 43 years who wish to become pregnant are asked to consider oocyte donation because of the low success rates for treatment with their own oocytes. Women aged 44 years have achieved viable pregnancy per cycle in only 1.6% of the cycles and no viable pregnancies have ensued in women aged 45 years (Grimbizis *et al.*, 1998). For obstetric

reasons, the Centre does not assist pregnancies in women aged over 50 years.

In a way, oocyte donation is similar to sperm donation in that both techniques depend on the donation of gametes. However, donating oocytes—as opposed to sperm donation— involves invasive medical treatment for the donor, covering ovarian stimulation and the transvaginal retrieval of mature oocytes under local anaesthesia. Understandably, not many women are willing to donate anonymously. Moreover, it has been reported that 'occasional' donors are psychologically fragile women, looking for recognition or massive self-repair (Englert, 1996). Similar indications were found where voluntary oocyte donors reported histories of family trauma or reproductive trauma (Kennard *et al.*, 1989; Schover *et al.*, 1990, 1991). In one report (Englert, 1996) some 'occasional' donors were excluded for fear of disrupting an unstable psychological balance. In another report however (Schover *et al.*, 1991), it was believed that when issues of loss are examined and when the expectations of the donor are realistic, the process of helping another woman can be reparative. However, extensive and careful psychological screening of potential donors is proposed in all cases (Kennard *et al.*, 1989; Schover *et al.*, 1991; Schenker, 1992; Lessor *et al.*, 1993). According to one investigation (Braverman, 1993), donors need to be screened for psychopathology and their ability to cope with the psychological unknowns and stresses in a donor cycle. Furthermore, donors need to understand the boundaries of their role and need to be fully capable and free from any kind of coercion in giving informed consent.

In some surveys, oocyte donors received financial compensation (Kennard *et al.*, 1989; Schover *et al.*, 1991; Lessor *et al.*, 1993). Some authors have expressed their concern about donors motivated by financial compensation (Kennard *et al.*, 1989; Lessor *et al.*, 1993) and consider financial gain to be a risk factor in general (Sauer, 1996). Although no regulation exists concerning assisted reproduction in Belgium, article 1128 of the Civil Code states that the body or parts thereof cannot be the object of a sales agreement (non-commercialization of the body). Most fertility centres will, therefore, not allow donors to be compensated financially, except for a reasonable reimbursement of their expenses.

In the literature, other groups of potential donors are also suggested, such as IVF patients themselves. IVF patients seem ideal donors as there is no supplementary medical risk. For obvious reasons, however, these women wish to maximize their chances of pregnancy by using a significant number of their own oocytes and by cryopreservation of supernumerary embryos for their own future use. In 1991, it was stated that it seemed only reasonable for recipients to share costs of the

oocyte donor's IVF cycle (Grainger, 1991). In 1996, egg-sharing using IVF patients was introduced (Ahuja *et al.*, 1996). In this system, donors shared their oocytes equally with a matched anonymous recipient. In return, recipients paid the cost of egg collection. However, others (Schenker, 1992) believed that an ethical problem might arise in cases where the recipient woman conceives and gives birth to a child while the donor herself does not conceive. According to a later report (Ahuja *et al.*, 1996), an unsuccessful IVF treatment cycle will always cause distress and there is no indication that this is more upsetting for the patient who has been a donor. Nevertheless, even the egg-sharing procedure does not provide a sufficient number of donor oocytes in our centre. This procedure is often the last solution for women aged over 40 years who are unable to recruit a donor among family and friends.

Belgium is one of the few West European countries where no regulation exists concerning assisted reproduction. Only one article inserted by the Belgian filiation law of 1987 into the Belgian Civil Code refers to the use of new reproductive techniques. Article 318, section 4, states that a married man, after giving his consent for artificial insemination of his wife, cannot deny his paternity. The fertility centres created their own rules regarding acceptance into treatment programmes (Baetens *et al.*, 1996). Known donation is, therefore, possible in Belgium. This is in contrast to other Western European countries such as Denmark, France, Spain and the United Kingdom, where oocyte donation is permitted by law but only in an anonymous procedure (Gunning, 1998). Moreover, in the UK donor offspring born since the introduction of the Human Fertilisation and Embryology Act 1990 have a right of access to non-identifying information about their genetic origin (Blyth, 1998). In Belgium, most fertility centres will respect full anonymity, and all couples and donors are informed that in an anonymous procedure no information will be given to the parents, the donor, or to the donor offspring.

In order to avoid a long waiting period, the Fertility Centre of the Free University of Brussels suggests that couples in need of donor oocytes search for their own donor among relatives and friends. Between 1992 and 1996, recipient couples were given a choice between two alternative types of donation. One type was a procedure called 'personalized anonymity' (Raoul-Duval *et al.*, 1992), whereby each recipient couple attended with a donor, but the oocytes from that donor would be assigned to another recipient couple, who in return provided the oocytes from their donor for the first couple. This exchange was arranged by the fertility centre in such a manner that the recipient couples had no contact with the donors, and anonymity was guaranteed. In the second procedure, recipient couples would opt for treatment with the oocytes from their own donor. In both procedures non-transferred embryos were frozen for future use by the recipient couple.

The anonymous oocyte donation procedure was changed in 1997. The exchange is now effected between one donor recruited by a couple and three anonymous recipient couples in one IVF cycle. In return, the first couple has a right to three trials with fresh oocytes from three anonymous donors. The aim is to avoid the cryopreservation of embryos. Thawing

frozen embryos results in the loss of 50% of the embryos for further use. By using fresh material, the chances of success increases substantially and might motivate choosing of the anonymous donation procedure. The organization of this procedure does not allow the centre to match recipients and donors for physical characteristics, except for ethnicity.

A psychologist counselled all couples requesting oocyte donation in our fertility centre. The aim of the counselling was not to enforce certain decisions but to guide the decision-making process regarding the kind of donation to be used. Attention was also paid to possible psychological consequences of this decision.

Materials and methods

Between 1992 and 1996, 103 couples found a donor and asked to be considered for oocyte donation. A second group of couples in need of donor oocytes recruited an additional 41 donors and received psychological counselling in 1997 and the first months of 1998, after the anonymous procedure changed. The aim of the counselling was to support recipient couples in making decisions, and the current findings are therefore based on semi-structured interviews.

Counselling, in addition to helping recipient couples, provides interesting information on the motivations for choices that recipient couples make, as well as valuable data regarding the choice of donors. Furthermore, we examined whether or not the treatment is kept secret from the social environment and, if so, why it is kept secret. Additionally, we wanted to know if recipient couples intend to inform their potential child about the treatment. Since recipient couples are seen together with their donors, counselling also provides useful information on the donor, such as the way in which donors relate to the recipient couples and their motivation for donating oocytes.

Results

Recipient couples

The average (\pm SD) age of the women wishing to become pregnant was 34.95 ± 6.64 years, while the average age of their partners was 35.58 ± 7.17 years. Ages ranged between 22 and 51 years for women, and between 23 and 64 years for men. Forty women were aged 40 years or more. Women aged over 40 had partners who were on average 2.5 years younger ($t(48.12) = 2.02$; $P < 0.05$), while the partners of women younger than 40 were on average 1.8 years older ($t(185.59) = -2.62$; $P < 0.01$).

The mean (\pm SD) duration of the partner relationship was 7.72 ± 4.88 years (range 1 to 25 years). Some 79.9% of the couples were married, and 20.1% were co-habiting (two couples among the latter group had a lesbian relationship). Among the couples, 78.5% had no children. In 14.6% of the cases, one or both partners had had children in a previous relationship, and 6.9% of the couples already had children in the same relationship. Some 18.1% of the women had given birth, implying that the fertility problem had appeared after the birth of one or more children.

Although only 45.8% of the recipient couples had Belgian nationality, 56.3% lived in Belgium. Of the foreigners involved in this study, almost one-third of the couples came from neighbouring countries Germany, France and the Netherlands

Table I. Nationality of the recipient couples

Nationality	Number of couples	Overall percentage
Belgium	66	45.8
Germany	17	11.8
France	15	10.4
The Netherlands	12	8.3
European countries	8	5.6
Non-European countries	11	7.7
Mixed couples	15	10.4
Total	144	100

Table II. Medical reasons for oocyte donation

Medical reasons	Number of patients	Percentage
Premature ovarian failure	52	36.1
Recurrent failure of IVF treatment	41	28.5
Age	19	13.2
Surgical removal of the ovaries	13	9
A hereditary condition	11	7.6
Turner syndrome	5	3.5
Sterilization	1	0.7
Unknown	2	1.4
Total	144	100

IVF = in-vitro fertilization.

(Table I). The Belgian recipient women ($t(142) = -3.87$; $P < 0.0001$) and their partners ($t(137.05) = -3.65$; $P < 0.0001$) were on average 4 years younger.

The main reason for requesting oocyte donation was premature ovarian failure (36.1%). Recurrent failure of IVF treatment due to a low level of response to hormonal stimulation or to developmental problems of the embryo was the second most important reason (28.5%). Other medical reasons were surgical removal of the ovaries, a hereditary condition, or Turner syndrome. In 13.2% of the cases, oocyte donation was proposed because of the age of the women who wished to become pregnant (Table II). In our centre, the general rule is to perform oocyte donation in women aged over 43 because of the low success rates of IVF treatments with the woman's own oocytes. For 29.2% of the couples, oocyte donation was the first fertility treatment. Some 68.8% of the couples had previously been treated: 38.9% had had IVF treatment, 13.9% hormonal stimulation, and 11.8% had already had one transfer with donor oocytes.

Donors

On average, the donors were 30.83 ± 4.83 years old (range 17 to 42 years). Among the donors, 79.2% had a partner relationship: 59% were married and 20.1% were co-habiting (one of the latter group was living with a female partner). Some 16.7% of the donors had no partner, 3.5% were divorced, and one donor was a widow. Of the donors, 23.6% had no children. However, among the 76.4% of donors who had children, 23.6% had one child, 32.6% had two children, and 20.2% had three children or more. In total, 75.7% of the donors had no wish to have (more) children; in addition,

12.5% of them had been treated for a fertility problem in the past. Only one donor had gone through a previous donor cycle, and two donors were currently undergoing IVF treatment.

The majority of the donors were friends (35.4%) or sisters (27.7%) of the recipient woman. Only 13.9% of the donors were relatively unknown to the couple before the treatment. In such cases, the donor was contacted through the intermediary of a sibling or a friend, found through advertising or simply as a result of open discussion of the fertility problem.

Consequently, the majority of the donors (66.7%) were motivated mainly by the personal relationship that they had with the recipients. They wished to help the couple personally, and in a concrete way. Some 22.9% of the donors had a more generally altruistic motivation. For instance, they wished to help the recipient couple but, if asked, they would also consider undergoing treatment for other couples. Some 36.8% considered infertility a very traumatic experience for anyone who has to deal with it. Often, the personal bond with the recipient couple, if any, was for the donor an important reason, but not the only reason for helping them.

As might be expected, there was a significant relationship between the way donors were related to the recipient couple, and their motivation in donating. When donors were close relatives of the recipient couples, their motivation was based on the personal bond ($\chi^2 = 25.67112$; d.f. = 2; $P < 0.000001$). Donors who were relatively unknown to the recipient couple prior to the treatment were significantly more motivated by more generally altruistic reasons ($\chi^2 = 26.19520$; d.f. = 2; $P < 0.00001$).

Some 58.3% of the donors mentioned spontaneously that they made a distinction between the oocyte donated and the child born afterwards. They almost always referred in this respect to the monthly loss of oocytes. In their view, the woman who carries and gives birth to the child must be considered the mother. There was no wish to interfere with the education of the child or to take any responsibility towards the child at all.

In 39.6% of the cases, no clear-cut distinction was made between the oocyte and the child. For this reason, 12.5% of the donors preferred anonymous donation, so as to avoid contact with the child. For 6.9% of the donors, anonymous donation was even a condition of continuing the treatment, in order to protect themselves. Some 27.1% of the donors had ambivalent feelings towards the child born after oocyte donation. They felt responsibility towards the child and wished to be sure that the child was well taken care of by the parents, to such an extent that 9.7% of the donors preferred known donation for this reason.

Relationship between the recipient couples and the donors

As mentioned above, most couples asked a friend or a sister of the recipient woman to be the donor. An overview of the relationship between the donor and the recipient couple is given in Table III.

In 65.3% of the cases there was frequent contact between the donor and the recipient couple before treatment, which would probably continue after the treatment. In all, 34.3% of the recipient couples had little or no contact with the donor.

Table III. Status of the donor in relation to the recipient couple

Status of donor	Number of patients	Percentage
Sister	40	27.8
Sister of the husband ^a	5	3.5
Friend	51	35.4
Donor (relatively) unknown to the couple before treatment	20	13.9
Sister in law	12	8.3
Daughter of the recipient by a former relationship ^a	3	2.1
Cousin ^a	11	7.6
Other donor	2	1.4
Total	144	100

^aIf donor is genetically related to the husband, known donation is not possible. In such cases, oocytes are donated to another unrelated couple.

In some cases the donor was relatively unknown to the recipient couples and neither side had any intention of keeping up contact after the child was born. In other cases the donor was a close relative or an intimate friend, and this was the main reason why they were asked to be the donor. Nevertheless, because recipient couples and donors lived far away from each other they met only occasionally.

The comparison of the mean age of the donor to the mean age of the recipient women in the whole group shows that the donor is on average 4 years younger than the recipient [$t(261.33) = 6.02$; $P < 0.0001$]. The donors recruited by recipient women aged over 40 were on average 12 years younger than the recipient women ($t(57.98) = 13.77$; $P < 0.0001$).

Recipient women ($t(142) = -2.54$; $P < 0.05$) and their partners ($t(142) = -2.18$; $P < 0.05$) who were in frequent contact with the donor were on average almost 3 years younger. Belgian couples tended to have significantly more donors younger than 30 ($\chi^2 = 6.028$; d.f. = 2; $P < 0.05$). Moreover, the mean age of donors (27.43 years) with a wish for a child of their own was significantly different from that of donors (31.93 years) without such a wish ($t(142) = -5.21$; $P < 0.0001$). This might explain the significant but perhaps coincidental relationship in some characteristics between the donors and the recipient couples, such as the fact that Belgian couples had significantly more donors with a wish to have a child of their own than did foreign couples ($\chi^2 = 5.40$; d.f. = 1; $P < 0.05$) because Belgian donors and recipient couples were younger.

Known donation versus anonymous donation

Some 68.8% of the couples chose known donation, i.e. they preferred to be treated with oocytes from 'their' donor. The motivation of recipient couples to opt for known donation is summarized in Table IV. The most common practical motive was the assumption of couples that their donor had a proven fertility because she had children of her own or because she was very young.

The other recipient couples (31.3%) opted for the 'personalized anonymity' procedure. The motivation for this choice is summarized in Table V. In 4.4% of the cases, known donation

Table IV. Motivation for known donation

	<i>n</i> ^a	Percentage ^b
Fear of genetic material of unknown origin	55	55.6
Trust in the personality of the donor	46	46.5
Genetic link between the donor and the recipient woman	33	33.3
Physical resemblance between donor and recipient woman	19	19.2
Practical motive	12	12.1
Preference of the donor for known donation	13	13.1
Genetic background of the child in order to be able to answer the child's questions	6	6.1
Exchange not possible	3	3.1

^aCouples who preferred known donation ($n = 99$).

^bSome couples responded to more than one motivating factor; hence percentages do not total 100.

Table V. Motivation for anonymous donation

	<i>n</i> ^a	Percentage ^b
The wish to mark explicit boundaries between the two families involved	33	73.3
Independence from others (donors and their family)	12	26.7
Protection of the donor	10	22.2
Minimize the link between the donor and the child	9	20.0
Practical motive (success rate)	3	6.7
Known donation was not possible	2	4.4

^aCouples who preferred anonymous donation ($n = 45$).

^bSee Table IV.

was not possible because the donor was genetically related to the husband.

Surprisingly, couples who were offered the chance to have three cycles of oocyte donation, i.e. after the anonymous procedure changed in 1997, did not prefer significantly more anonymous donation, although the change increased their chances of success.

Recipient women who had chosen known donation were on average 4 years older ($t(142) = -3.66$; $P < 0.0001$), and their partners were on average 3.7 years older [$t(117.04) = -3.33$; $P < 0.001$]. Belgian couples opted significantly more for anonymous donation ($\chi^2 = 11.44310$; d.f. = 1; $P = 0.00072$). Couples who had not been treated before also opted significantly more for anonymous donation ($\chi^2 = 5.48671$; d.f. = 1; $P < 0.05$).

There was no significant relationship between the choice of recipient couples for known or anonymous donation and the status of the donor. Couples with a donor who was a close relative did not opt significantly more for known donation, and neither did couples who were in frequent contact with their donor. Nevertheless, couples with a donor who had a wish for a child ($\chi^2 = 8.76319$; d.f. = 1; $P < 0.005$), who wished to avoid contact with the child born from their donated genetic material ($\chi^2 = 45.30308$; d.f. = 2; $P < 0.000001$), and who were motivated by altruistic reasons ($\chi^2 = 8.18334$; d.f. = 1; $P > 0.005$) opted significantly more for anonymous donation. Consequently, couples with a donor motivated by a

Table VI. Motivation for secrecy towards the social environment

	<i>n</i> ^a	Percentage ^b
Fear of lack of understanding from the social environment	49	55.1
Fertility problem is a private matter	28	31.5
Avoiding confusion as to the identity of the mother	17	19.1
Welfare of the child: fear that the child would be considered a 'special' child and treated differently by others	14	15.7
Religious/cultural reasons: openness would place the couple in a marginal position	14	15.7
Not decided whether to inform the child or not	8	9.0

^aCouples who wanted secrecy in the social environment (*n* = 89).
^bSee Table IV.

Table VII. Motivation for openness towards the social environment

	<i>n</i> ^a	Percentage ^b
No reason to keep the treatment secret, nothing to be ashamed about	33	57.9
Looking for support to family and social environment	17	29.8
Fertility problem or hereditary condition was known by family and friends	16	28.1
The search for a donor	3	5.3
Visible ethnic difference between the donor and the recipient woman	2	3.5

^aCouples who wanted openness in the social environment (*n* = 57).
^bSee Table IV.

personal bond with the recipient couple ($\chi^2 = 14.54545$; d.f. = 1; $P < 0.0005$) and who felt responsibility towards the child born from her donated genetic material in such way that she trusted the recipient couple to be 'good' parents ($\chi^2 = 45.30308$; d.f. = 2; $P < 0.000001$), opted significantly more for known donation.

Secrecy

What will recipient couples tell to others in their social environment, and what do they intend to tell the child born after oocyte donation?

Secrecy towards the social environment

Some 36.1% of the recipients told no one but the donor about the treatment; 16% wished to keep the treatment more or less secret but told one or two relatives or close friends, while 15.3% told family and close friends. However, 32.6% of the recipients made no secret at all of their infertility problem.

The motivation for secrecy or openness towards the social environment in these couples is summarized in Tables VI and VII.

Recipient women ($t(142) = 3.37$; $P < 0.001$) and their partners ($t(142) = 3.38$; $P < 0.001$) who told no one about the oocyte donation were older. Especially, recipient women of 30 years and younger showed a significant tendency to tell at least one person other than the donor ($\chi^2 = 12.66072$; d.f. = 4; $P < 0.05$). The same tendency was found for their partners ($\chi^2 = 17.17537$; d.f. = 4; $P < 0.005$). Women who had already given birth to a child tended significantly more

Table VIII. Motivation for secrecy towards the child

	<i>n</i> ^a	Percentage ^b
Welfare of the child	45	68.2
Fear it might disturb the mother-child relationship	30	46.2
Protection of the donor and her family	14	21.5
Religious/cultural reasons	12	18.5
The wish to forget the treatment	8	12.5

^aCouples who wanted secrecy towards the child (*n* = 65).
^bSee Table IV.

Table IX. Motivation for openness towards the child

	<i>n</i> ^a	Percentage ^b
The wish to have no secrets in the family	41	60.3
Social environment informed	30	44.1
The right of the child to know his/her biological background	13	19.7
Reassurance about a hereditary risk	6	9.1
Ethnic difference	2	3.0

^aCouples who wanted openness towards the child (*n* = 67).
^bSee Table IV.

than childless women, to tell no one about the treatment ($\chi^2 = 6.44784$; d.f. = 2; $P < 0.05$). Couples who had opted for treatment with oocytes of their own donor tended significantly more to tell no one except for the donor ($\chi^2 = 5.47279$; d.f. = 1; $P < 0.05$).

Secrecy towards the child

Before treatment, 43.1% of the couples intended not to tell the child about its conception, whereas 43.8% would be willing to inform the child born after treatment. Some 13.2% of the couples were still unsure whether to tell their child or not. Often, this reflected uncertainty about how and when to tell their child. Moreover, some couples needed to be reassured about the consequences that this information might have for their child.

Tables VIII and IX summarize the motivations of couples regarding secrecy or openness towards the child. Two-thirds of the couples choosing to withhold information from the child did so because of the fear that the information might disturb the child's normal development. Almost half of the couples were afraid of disturbing the mother-child relationship by telling the child. Protection of the donor and her family was also a reason for keeping the treatment secret and preventing a future scenario where the donor might be confronted with questions from the child born with her genetic material. Where the donor had children of her own, it might be necessary to tell these children too. Perhaps donors wish also to avoid confusion about family relationships. In other cases, recipient couples wished to avoid the child accidentally telling someone who they feared would react negatively towards the donor. Religious or cultural reasons motivated 18.5% of the couples to keep the treatment secret from the child. Recipient couples feared that the knowledge of its origins would marginalize the child with regards to its religion or culture. Some couples

wished to forget about the treatment: the child was to be 'our' child.

Some 60% of the couples who were willing to tell their child saw no reason for not doing so. These future parents wished to have no secrets in the family. They thought that having a child in this way would only confirm to the child how much it was wanted, although conception would of necessity have taken place with genetic material from a donor. In other cases, too many people knew about the treatment and the couples considered that there would be a risk that the child might learn about the treatment from someone else. Almost 20% of the couples choosing to tell their child had the feeling that their child had a right to know about its biological origin. Some couples had the feeling that they were obliged to tell the truth because of the wish to reassure their child that there was no hereditary risk, or because they had to explain a visible ethnic difference.

Women who wished to tell the child were on average 2.2 years younger than those who wished not to tell their child [$t(123) = 1.86$; $P = 0.066$]. Partners who wished not to withhold this information from the child were on average 2.6 years younger than those who wished to do so [$t(123) = 2.02$; $P = 0.046$].

There was no significant relationship between the choice of known or anonymous donation and the decision taken to inform the child about his/her conception. Neither was there a significant relation between the intention of recipient couples to tell the child and the status of the donor, and whether the recipient couples were in frequent contact with the donor. The decision to tell the child was not significantly related to any characteristic of the donor. Only one characteristic of recipient couples was significantly related to this decision: women who had given birth to a child before the treatment were significantly more secretive towards their child than women who had not already given birth to a child ($\chi^2 = 6.66506$; d.f. = 2; $P < 0.01$). Women and their partners who wished to tell the child were younger than those who wished not to tell their child ($t(123) = 1.86$; $P = 0.066$; $t(123) = 2.02$; $P = 0.046$). A similar tendency was found for the decision whether to tell family and friends. A significant relationship was found between openness/secretcy towards the child and towards the social environment ($\chi^2 = 59.66751$; d.f. = 4; $P < 0.000001$). Couples who decided not to tell the child or who were still unsure about telling the child were significantly more secretive towards the social environment, while couples who intended to tell the child tended to be significantly more open towards family and friends.

Discussion

In order to avoid a long waiting period, all couples involved in this research group searched for a donor among relatives and friends. In 1993, it was suggested that oocyte recipients have a different perception of their donors according to the emotional relationship they have with the donor (Bertrand-Servais *et al.*, 1993). Donation from a sister or a close friend is perceived as a proof of unselfish love and reinforces attachment, whereas donation from a stranger is stripped of

the emotional link and perceived as a generous act (Bertrand-Servais *et al.*, 1993). In our research group, the majority of recipient couples chose donors they personally knew and trusted (such as sisters and close friends) in order to ask what is often considered to be an inappropriate question. Personal involvement with the recipient couple was the main motivation of the majority of donors, and especially of donors who were close relatives of the recipient. A small number of donors were relatively unknown to the recipient couple prior to the treatment, and these were mainly motivated by a more generally altruistic motivation. They wished to help out of a kind of solidarity with the woman who was unable to become a mother. Donors who were friends were mainly motivated by feelings of compassion towards the person with the fertility problem, but their personal bond with the recipient couples also played an important part. Similar donor motivations were found in research on relational anonymous—and known—donation (Weil *et al.*, 1994) and in research on women volunteering to become oocyte donors (Lessor, 1993).

Older couples are put in a very difficult position since their peer group is not suitable to provide a donor. The majority of women aged over 40 years were involved in a partner relationship with younger partners. Often, this was a second relationship with a man who had no children. Donors of women aged over 40 were much younger than the recipient woman and therefore did not belong to the peer group of the couple. Couples had significantly less contact with the donor, and often the donor was relatively unknown to them. The age of the donor is the most important factor in the search for a donor by older couples in order to provide reasonable chance of the treatment succeeding. This factor is more important than the trust that younger recipient couples place in the donor. The risk of having paid donors is more important in the group of women aged over 40.

If the recipient woman has a sister of the right age with whom she has a good relationship, the sister seems to be the most logical candidate to be asked such a difficult question. Some 27.7% of the donors were sisters of the wife. Research on attitudes regarding the use of siblings for gamete donation (Sauer *et al.*, 1988) revealed a significant difference between couples requesting oocyte donation and couples requiring donor insemination (DI). The acceptability of using a sister for oocyte donation is much greater than the acceptability of a brother as sperm donor. This might be explained by the different general attitudes towards oocyte and sperm donation. According to one report (Haines, 1993), oocyte donation is seen in a familial, clinical and asexual context in which the donor is considered to be altruistic, whereas sperm donation is regarded in an individualist unregulated context of dubious sexual connotations with sperm donors who are suspected of having doubtful motivation. Moreover, oocyte donation is considered to be less of a threat to the femininity of the infertile women than semen donation is for the masculinity of the sterile male partner (Petee and Weckstein, 1993).

However, some risks might be involved in oocyte donation between sisters. One author (Lessor, 1993) believes that patients and donors experience treatment differently even though the event is shared. According to Lessor, donors move from

complete inexperience of infertility treatment to an intense contact with the clinic, but are not regarded as patients as they have no pathological condition. If the treatment fails, both sisters feel disappointed, but the sister-donors may be apt to experience their contribution as unfinished and incomplete, with associated feelings of having let their sister down (Lessor, 1993). However, such feelings might also occur in donors who are close friends. Donors and recipients often regard oocyte donation as a common project of two women in order to help one woman to become a mother. In the minds of the donors, this project often ends with pregnancy after one treatment cycle, while recipients are less enthusiastic and even less willing to talk about the potential child in order to protect themselves from possible disappointment, especially if they have frequently experienced failure with other treatments. Before treatment, donors cannot decide whether or not they will start another donor cycle if the treatment fails. They appeal to their lack of experience with the treatment to justify postponing this decision.

Two-thirds of the recipient couples preferred known donation. Other research showed the same preference of recipient couples for non-anonymous donation where the option was available (Sauer *et al.*, 1991; Leeton *et al.*, 1993; Pettee and Weckstein, 1993). The option of treatment with known oocytes was motivated mainly by reasons related to fear of anonymity. In one-third of the cases, the genetic link between the recipient woman and the donor was an important motivation in choosing treatment with oocytes of known origin. Research showed that recipients who had asked a blood relative to be the donor acknowledged that the genetic link was an important factor in their choice for known donation (Bartlett, 1991; Lessor, 1993). According to one report (Robertson, 1989), the ban on intrafamilial donations is premature because the benefit of a genetic connection with the child might outweigh any harm.

In almost one-third of the cases, recipient couples opted for anonymous donation. Marking explicit boundaries between the two families involved, and motivated the recipients in choosing the 'personalized anonymity' procedure. Because couples who themselves search for a donor might be related in a very dependent way to their donor, it was suggested that anonymity alleviates the debt of the recipient couple to the donor and enables them to construct their own parental status (Raoul-Duval *et al.*, 1992). Furthermore, anonymity protects the child from a potentially harmful multiple-parent situation. Nevertheless, research has shown that parents perceived their offspring as undoubtedly theirs (Raoul-Duval *et al.*, 1992).

Couples tended to take some characteristics of their donors into consideration when making their choice of anonymous or known donation. Couples who had donors wishing to avoid contact with the child born of their genetic material and with the desire to have a child of their own tended significantly more to choose anonymous donation, so as to protect themselves, their donor and the potential child from possible problems. Couples with donors motivated by a personal bond with the recipient couple opted more for known donation. In these cases the majority of the donors would mention their willingness to go through the rather stressful procedure for a specific recipient couple while expressing reluctance to do so

for someone with whom they had no emotional tie. Perhaps recipients respect this attitude of donors in choosing treatment with the oocytes from 'their' donor.

Some practical considerations might also play an important part in the choice of anonymous or known donation. Organizing the exchange in the anonymous procedure takes more time than does the direct oocyte donation, where only the cycles of two women have to be synchronized. Older couples opted more for known donation because they had the feeling that there was not much time left in which to become parents. Foreign couples opted significantly more for known donation than did Belgian couples. Foreign couples may be thought to have this choice because they wished to organize their donor cycle in the simplest way and reduce travelling time, but this seems to be contradicted by the fact that couples living in foreign countries failed to reveal this tendency at a significant level. French couples, in particular, come specifically to our centre because known donation is forbidden by law in their home country.

No differences in social characteristics and attitudes towards donating oocytes between donors who donated anonymously and donors who donated to known recipients were found, except that the known donor group felt a significantly greater connection to the potential child (Leeton and Harman, 1987). In our research group, 58% of the donors regarded the oocyte as another body cell and denied a connection to the potential child, but others had more ambivalent feelings. On the other hand, all the donors and the recipient couples agreed that the woman who is pregnant and gives birth to the child should be regarded as the 'real' mother. Belgian civil law protects gestational mothers in this respect because the woman who gives birth to the child is considered the legal mother. The same attitude was found in other research (Weil *et al.*, 1994) where donors always expressed their lack of rights towards the child born from their genetic material, because of authenticity conferred by the pregnancy and fertilization by the father. This was confirmed in research where both donors and recipients regarded gestational parentage as more important than genetic parentage (Kirkland *et al.*, 1992). According to one group (Raoul-Duval *et al.*, 1992), pregnancy, childbirth and early mother-infant bonding make children born after oocyte donation the true offspring of the women bearing them.

Having access to information about the donor is useful only if children are to be told about their conception and the use of external genetic material. Approximately 44% of the couples had the intention, before treatment, to tell their child about its conception. According to another group (Mahlstadt and Greenfeld, 1989) there will, in known donation, always be a third parent whose psychological significance is not really understood. Some authors also think that secrecy stigmatizes and marginalizes the parents and the children (Wood, 1994; Daniels, 1996). On the one hand, openness might upset ongoing relationships in recipient and donor families in cases where parents choose known donation. Openness may also create confusion in the child's development of identity and lead to an incomplete sense of identity when parents opt for anonymous donation. On the other hand, secrecy about a matter of such importance to the child will always burden the parents for a

long period of time and might therefore be indirectly harmful to the child. The literature on the question of secrecy or openness in this respect being harmful or beneficial is mainly theoretical. Any long-term consequences for the children have not yet been established. Research on the consequences of the use of donor spermatozoa shows that the treatment is mainly kept secret in heterosexual families, whereas lesbian couples and single mothers tended to be open (Brewaeys *et al.*, 1993; Baetens *et al.*, 1995; Wendland *et al.*, 1996). Neither secrecy nor openness seems to have any negative impact on the development of the children (Giavazzi *et al.*, 1996; Golombok *et al.*, 1996; Brewaeys, 1997). For this reason, the decisions of recipient couples are respected and they are counselled about the possible negative consequences of the decision they have made. Our centre, therefore, applies a modified version of the 'double track' policy (Pennings, 1997). Potential parents are also counselled about the way in which they should tell their child in order to minimize possible negative consequences, i.e. in the presence of both parents, at an early point in life, for instance when the child asks about conception in general, and according to the developmental level of the child. The necessary openness should be created so that the child may ask questions at any point in his or her development when new questions arise regarding the consequences of the use of donor material. The donor should be presented as a donor who gave the gift of life, but who is not a mother.

Almost half of the recipient couples were more or less open towards their social environment about the treatment with donor oocytes. Similar percentages of couples who told their social environment (about 50%) were found in other studies (Petee and Weckstein, 1993; Weil *et al.*, 1994), but these differed from the numbers of couples who told parents in a direct donation procedure (Weil *et al.*, 1994). In our research, couples who opted for known donation tended to be significantly more reticent towards the social environment. This might reflect the discomfort of recipient couples about not knowing what the long-term consequences of openness will be, especially if people outside the families of both recipients and donors are involved and are able to link the child to the donor. It is clear that younger couples were more at ease with the idea of being open about the treatment. Recipient women who had already given birth to a child tended to be significantly more secretive towards the social environment and towards the child, avoiding in this way that the children would be treated differently by family and friends.

As regards 'the best interests of the child', many questions remain unanswered. Little is known about the effects of oocyte donation on the development of the children, and follow-up research is, therefore, essential. The results of this investigation are based on the original choices made by couples requesting oocyte donation. All couples in this research were aware of the potential risks involved in their decisions. Nevertheless, almost 10% of the applicants were given negative psychological advice. In two cases, the donor was too young (<21 years). Four recipient women were psychologically fragile and/or their partner relationship was not stable. In five cases both donors and recipient couples were involved in a psychologically unstable situation. Three requests were not accepted because

an intergenerational donation was proposed (the donor was a daughter of a first relationship of the recipient woman) and in cases of known donation this situation is considered too confusing for future family relationships. Moreover, the nature of the relationship between mother and daughter precludes the two parties, relating to each other equivalently. Daughters cannot be considered to be free from coercion in responding to a request from their mother. All psychological advice, negative or positive, is discussed in the bio-ethics committee of the Centre of Reproductive Medicine if the gynaecologist in charge of the patients or the patients themselves do not agree. One couple was accepted, although the advice was negative.

In four cases, a delay was proposed in order to give the donor and/or the recipient couple time to reconsider the situation and to weigh the pros and cons of a possible decision. In these cases, a lack of information on the possible consequences of their decision was the reason for postponing treatment. In four other cases, we proposed that the couples and the donor consider anonymous donation instead of known donation, in order to assure their independence from each other. In these cases treatment was not cancelled, but was postponed or the procedure was changed.

Some 84.5% of the requests were accepted as proposed by the recipient couple. However, trying to evaluate the risks and choosing adequate solutions to any problems that potential parents might have to face in childrearing practice is not easy. Counselling of each request is therefore considered indispensable.

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