Part II: The practice of oocyte donation today

Oocyte donation: particular technical and ethical aspects

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This paper analyses the reasons that oocyte and sperm donation are experienced very differently by couples, despite their apparent similarity, and stresses the impact of the difficulties on donor recruitment in all oocyte donation programmes. The various types of donors (occasional, relational, in-vitro fertilization patient and professional) are described together with their motivations, resistance, advantages and disadvantages. The contradictory consequences with free or paid donation, the particular risks of oocyte donation (in comparison with sperm donation) both for the donor and for the recipient are highlighted. The problem of maintaining anonymity is then analysed in ethical terms but also in terms of technical efficacy. A strategy is described which, due to the decision of retaining anonymity, authorizes the sharing of oocytes between recipients. This has as a consequence, an increase in treatment efficacy by avoiding wastage of oocytes offered as a donation.

Key words: anonymity/donors/ethics/oocyte donation

Introduction

Since the Australian team of Trounson and Wood first reported a successful oocyte donation >10 years ago (Trounson et al., 1983), the procedure has spread around the world, although in a limited way (small number of patients treated) when compared with sperm donation or with in-vitro fertilization (IVF) (2930 cycles of oocyte donation worldwide in comparison with 119 992 IVF cycles in 1991; Cohen et al., 1993). This modest activity is probably due more to the difficulties of the procedure for the oocyte donor (IVF) than to the lack of medical indications, since it is estimated that >100 000 women in the USA present with premature ovarian failure (before the normal age of menopause) (Rosenwaks, 1987).

One can imagine that this very special form of maternal filiation (giving birth to a child which is not genetically one’s own is a real ‘novelty’ for the human species) could have shocked the recipient candidates and the public at large and explain the relatively low resort to this technique. Some recipient candidates may also worry about the transmission of infectious or genetic disorders or, in case of non-anonymity, fear the ‘genetic’ donor ringing at the door some years later. However, a comparative examination of the differences and similarities between oocyte and sperm donation shows that it this is not the case.

It seems to be the difficulty of donor recruitment which plays a crucial role in all oocyte donation programmes, leading to ethically questionable or unacceptable practices under the pressures arising from the shortage of donors. It is therefore essential to fully analyse this situation to find more efficient solutions (reduce the shortage) whilst fully respecting the dignity and rights of the oocyte donors.

Oocyte donation and sperm donation: similarities and differences

From a purely rational point of view, oocyte donation is the mirror of sperm donation; it consists...
of introducing, in the couple, half of the genetic material from a third party donor (a male donor in the case of sperm donation, a female donor in the case of an oocyte donation). However, the similarity stops there; symbolically, sperm donation and oocyte donation are experienced very differently by couples. This was shown by a Californian study on the reaction of recipient couples to the possibility of recruiting the brother (or sister) of the sterile partner as the donor; whilst 86% of the women and 66% of their partners involved in oocyte donation stated that they would prefer the patient’s sister to an anonymous donor (moreover 80% had asked for it), only 9% of the women and 14% of the men involved in sperm donation expressed the same preference for the brother of the patient and no one had actually asked for it (Sauer et al., 1988). This difference has its origins in the different perception of feminine and masculine sterility, both by couples and by society; a perception which frequently leads to hiding masculine sterility and to openly accepting feminine sterility (David et al., 1988).

A couple confronted with the possibility of a sperm donation must overcome this symbolic barrier of medical adultery to be able to accept it (Czyba, 1989). Also, the donation of spermatozoa deprives the male partner of his only biological participation in filiation. This situation leads fathers of children conceived by artificial insemination by donor (AID) to be more involved with their children than ordinary fathers, as a way of reinforcing their social and affective filiation (Simenon et al., 1980; Manuel and Czyba, 1983). The fragility of filiation in a patriarchal society is, moreover, reinforced by the importance of biological filiation following the legal norms of paternal filiation to the point that some civil codes have introduced an exception clause to protect paternal filiation after AID.

It is altogether different in the donation of an oocyte; if the social and affective mother of the child is not its biological mother, then she is the gestational mother. From the legal viewpoint (at least in Europe), the mother is almost always the woman who gives birth. Symbolically, a woman will declare herself to be the mother of a child 'because she carried it and brought it into the world' and nobody would ever think of saying 'it's my child because it's my egg'. This symbolic reality is illustrated in the practice of the Fertility Clinic of the Erasme Hospital; the observation of a lack of interest from candidate oocyte recipients for the distinctive character of oocyte donation (little interest in matching donor/recipient, little motivation for keeping the secret of the donation), an observation which contrasts with the attitude of couples in the donation of spermatozoa.

In addition, maternity by oocyte donation repairs a double major wound in women not only confronted by the failure to become a mother, but also disturbed in their female identification (absence of a cycle) and even in their sexual identity (Turner’s syndrome, gonadic dysgenesis). All these reasons explain the massive denial observed in pregnant women or having given birth after an oocyte donation, which can go as far as ‘forgetting’ the distinctive character of their filiation ties (Weil, 1987; Raoul-Duval et al., 1991).

As far as the future of the children is concerned, the paucity of available data does not indicate real particularities (Raoul-Duval et al., 1993) in accordance with the studies carried out on children conceived by AID (Manuel and Czyba, 1983; Golombok et al., 1995). As well as these symbolic differences, there are equal distinctions concerning the material aspects of oocyte donation in comparison with sperm donation. If it is ‘biblically’ simple to donate spermatozoa, the same is not true for oocytes; it is necessary for the female donor to undergo a full procedure of ovarian stimulation and oocyte collection, which represents a significant effort in terms of availability and is not entirely without risk, even though complications are rare (Englert, 1994). This can explain the difficulty in recruiting oocyte donors which has been reported by all oocyte donation programmes and which requires recourse to various strategies (see below).

On the other hand, the difficulty associated with the small number of oocytes that can be collected during oocyte retrieval leads to the problem of the limitation of number of children by donor (the risk of inbreeding ignored for the descendants) being non-existent in the field of oocyte donation. Lastly, the present inability to store non-fertilized oocytes makes the use of quarantine as a prevention of risks of infection in sperm donation extremely
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difficult. Moreover, it complicates the programmes of anonymous donation since female donors and recipients must follow the treatment in parallel.

Oocyte donors

Recruitment

Oocyte donors are recruited in four distinct situations:

Occasional donors

These are women who, without any ties to a recipient, donate oocytes either spontaneously or when undergoing surgical procedures unrelated to a sterility problem. This group consists mainly of patients coming for a tubal sterilization, which offers the advantage that they are of reproductive age and in good health, having proved their fertility and who undergo an operation (sterilization by laparoscopy) in the course of which the oocytes can be retrieved. Although this situation could appear ideal, experience has shown that this type of recruitment has been disappointing, the teams encountering a large number of refusals. Although the practical aspects are often put first and can in part explain these refusals (these women have children, an active life and the constraints of stimulation discourage them), it seems that more fundamental reservations of an unconscious rivalry of a woman who renounces her fertility for good vis-à-vis another woman who could take advantage of her sterilization to become a mother (Chorier, 1987).

Spontaneous initiatives from the general public are rare, and according to our experience, are very often taken by women with a particularly fragile personality and psychologically disturbed, looking for a recognition or a massive repair. For these reasons, they are generally not considered able to give free and informed consent and their use as donors involves great risks of disrupting an extremely unstable psychological balance. However, there is a group of potential donors which apparently has been very little explored, namely that of former IVF patients who have had their child by this technique. In our experience, without any intervention of the IVF team, two candidates out of 18 belonged to this group (in this case they were ‘related donors’: donors recruited by patients among their relations) and these women were especially relaxed and positive in their action.

One study has drawn attention to the particular predisposition of these women to donate (at least in their intentions): 45 acceptances out of 66 patients interviewed patients and 63 responses (Kemeter et al., 1987). One might think that the debt these patients feel vis-à-vis the medical team can influence them, but they are certainly better informed than anyone (having lived through the same experience) and they are sensitive to the distress of being sterile, meeting thereby the characteristics of relational donors (see below).

Patients undergoing IVF treatment and agreeing to share oocytes

This involves asking patients who are undergoing oocyte retrieval for their own needs to donate some oocytes to an anonymous recipient, provided they have ‘a sufficient number’. Although the unquestionable advantage of this approach is that the donor does not have to suffer any additional medical aggression (see below: risks and informed consent), it does involve some ethical objections, e.g. is a patient who depends on the medical team for her own treatment able to give her consent freely to a process which potentially reduces her chances of success? From what number of collected oocytes would it be legitimate to retrieve oocytes? It seems that this approach, which has been practised widely in numerous countries, has been in decline since the development of the freezing process which makes it possible to preserve the chances of supernumerary embryos. Nevertheless, this source of oocytes has been historically important for the development of this technique (Kemeter et al., 1987; Junca et al., 1988) and is still current (Power et al., 1990; Oskarsson et al., 1991).

Related donors

These women are recruited as donors by the couples themselves within their family circle or friends. Many oocyte donation programmes in Western Europe operate in this way. The donors have a close relationship, often intra-family donations in the broadest sense. These donations, even if they come from very close relatives, are valued as much by the requesting couples (Sauer et al., 1988) as by the public at large, according to a Californian study (Lessor et al., 1990), although
with a little more reluctance from women (59% agree) than from men (74% agree). On the other hand, authorities occasionally oppose them invoking the fear of psychological consequences for the children involved in family relations which are too complicated (Robertson, 1989). This reluctance is linked to the fact that these programmes practise non-anonymous donation, although related oocyte donors can be integrated into a programme of anonymous donation as reported below.

**Professional donors**
These women give their oocytes in return for payment (currently, ~US$ 1200 per cycle). These programmes exist openly in the USA, the candidates being recruited by way of classified advertisements (Schover et al., 1992). If such practices are not within European traditions, it is nevertheless true that some compensation is often anticipated and that private arrangements without the teams knowing are possible in the case of related oocyte donors (Shenfield and Steele, 1995).

**Free, reward, expenses or payment?**
In most states in the USA, the recourse to professional oocyte donation is legitimized as much by the moral requirement of compensating the effort and time of the oocyte donor as by ‘the desire of the recipient to receive good genes in placing a premium on women who are in good health and who appear to be a good investment’ (Robertson, 1989). Such an approach, which restricts the medical techniques to well-off people is very common in the USA and is not specific to oocyte donation. Typically, according to Robertson (1989), oocyte donors come from the middle and poorer classes of American society. This approach is reprehensible as much from the commercial aspect (using products of the human body), as from the absence of respect for human dignity and from the risks for both donors and recipients in the non-observance of sanitary norms, the oocyte donors being interested in hiding possible health problems, following the same logic as has been described in blood donation (Rodriguez del Pozo, 1994). More subtle is the practice which consists in sharing the expenses of a patient in an IVF cycle in exchange for oocytes, a practice described in the USA (Robertson, 1989) and also in the British private sector (Shenfield and Steele, 1995).

The other extreme, which consists of demanding the absence of all financial transactions, is also barely tenable; the oocyte donor gives up her time, undergoes a procedure, engages in costs which, if they were not compensated, could be considered as exploitation. It is also necessary to provide a reward for the oocyte donor which symbolizes the recognition of her act. This is an important aspect which is often neglected; a blood donor benefits from a social reward in the form of a recognition and unquestionable self-enhancement. Such a reward does not exist when a gamete is donated.

In a psychological study of sperm donors, neither financial compensation nor altruism was found to be the main motive for taking the step; behind the announced motivation other motives are found, principally motives of reparation (Laruelle and Englert, 1989), which are found even amongst American professional oocyte donors (Schover et al., 1990). The financial compensation, provided it is not exaggerated, plays a facilitating role of reward and of compensation for expenses incurred, which seems to the author to be ethically acceptable. Positions which are too dogmatic because of the shortage which they entail can generate negative effects, e.g. couples breaking the secret (with the sole aim of finding a donor) or worse, encouraging the development of an underground traffic in oocytes which makes the cure worse than the pain.

**Features of the selection of an oocyte donor**
The rules for selection are in principle identical to those which prevail for sperm donors, with regard to both the psychological aspects and the genetic or infectious aspects; nevertheless some differences exist.

**For the oocyte recipient**
The present impossibility of freezing oocytes in a satisfactory way and the significant embryonic loss involved in the freezing of the embryo, makes it difficult to apply the generally recommended quarantine for human immunodeficiency virus (HIV) detection in sperm donation. The almost uniformly preferred strategy consists of a single detection as practised in blood donation. However, a decision can be made to freeze the embryos (accepting a significant reduction in efficacy estim-
Oocyte donation—principle of permutation between related donors to three donor/recipient couples.

Features of the female donor

Unlike sperm donation, oocyte retrieval is not without risk, either the risk related to ovarian stimulation or to oocyte retrieval, even to anaesthetic risk in case of general anaesthesia. An informed consent document is therefore all-important, and it must be preceded by the provision of meticulous information to the potential donor on the non-exceptional risks of treatment especially when it concerns non-anonymous donations where the medical risks often appear to be minimized by the potential donor (Weill et al., 1994). Since this consent is only of value if it is freely given, the discussion, in case of a related donor, must aim at detecting the candidates who may be pressurized by the recipient couple. In this case, it is necessary to act with tact to help the ‘non-candidate’ to get out of a commitment which has not been freely agreed to without compromising her relationship with the recipient couple, whether these relations are affective or professional ties.

Like sperm donation (and unlike others) we are not in favour of requiring the consent of the partner which would give him a certain influence over his partner’s decisions. However, the candidates are encouraged, in the interest of their relationship, to share their decision with their companion and most of them are seen with the donor candidate for information consultations.

Counselling donors and recipients

Counselling donors as well as recipients is, in principle, similar to the counselling for semen donation; to help donors to clarify their feelings, to check if all aspects are known and understood, to evaluate the capacity of both donor and recipient to deal with the decision they are ready to take. Counselling must include the particular difficulties...
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31 Donor cycles
→ 128 Recipient cycles

30 Oocytes pick-up
(1 low responder)
→ 105 Cycles with at least one oocyte
(23 cancelled cycles for lack of oocytes)

523 Collected oocytes
(17.4 oocytes/retrieval)
→ 97 Cycles with transferred embryos
(6 fertilization failure)
(2 embryo freezing for lack of synchronization)

334 Embryos obtained
→ 231 Transferred embryos

Pregnancy rate per oocyte pick-up = 106%
32 Pregnancies
implanted embryos
43 Implanted embryos

Pregnancy rate per cycle with oocyte = 30%
per embryo transfer = 33%

Implantation rate per transferred embryo = 19%

Figure 2. Benefit of oocyte sharing in a permutation between related donors.

Raised above for the donor as well as for the recipient and thoroughly relates to the question of anonymity or not as exposed below. Like semen donation, particular care must be taken in counselling donor candidates who are not already mothers.

Anonymous or non-anonymous donation?
The fundamental debate is to a large extent parallel to that of sperm donation but the greater openness which now exists in oocyte donation has two consequences: the de-facto existence of a known donation when this remains rather an academic assumption in sperm donation and in addition, a known donation that really opens the way to a contact between the donor and the child's family as a majority of these non-anonymous donations are within the family (Weil et al., 1994). In sperm donations, the countries most opposed to anonymity have never gone further than the disclosure to the child, on reaching his majority; the identity of the donor remains inaccessible to the parents and to the under age child. We do not intend to reopen the debate on anonymity, but to recall that, currently, there is no existing data which would demonstrate the superiority of one or the other approach (Mahlstedt and Greenfield, 1989; Nachtigall, 1993).

The organization of a programme of anonymous or non-anonymous oocyte donation has an impact which goes far beyond the problem of the management of anonymity. In a system of related donation similar to that practised in the Erasmus Hospital since 1989, the maintenance of anonymity by a permutation of oocyte donors (usually family members or close friends), has led to a considerable reduction in oocyte shortage (Figure 1). Firstly, the anonymous permutation offers to the family of the recipient's partner the possibility of recruiting a donor (since in any case the oocytes will go to another recipient), which already represents a considerable advantage.

Then, and unlike what has been done in other programmes of maintaining anonymity by the permutation of related donors (Frydman et al., 1990), this permutation permits to avoid a large extent supernumerary embryos. The retrieved oocytes are shared between several recipients following a pre-established sharing key and each recipient can benefit from part of the oocytes of several donors (the only exclusion being the one that she herself has contributed) (Table I). Oocyte
Table I. Permutation and sharing between related donors in an anonymous programme (with four recipients)

<table>
<thead>
<tr>
<th>Donor (D)</th>
<th>Successive oocyte retrievals</th>
</tr>
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<tbody>
<tr>
<td>First place</td>
<td>D1: R2</td>
</tr>
<tr>
<td>Oocytes nos. 1,</td>
<td>D2: R3</td>
</tr>
<tr>
<td>3, 5, 7, 9, 16...</td>
<td>D3: R4</td>
</tr>
<tr>
<td>Second place</td>
<td>D4: R1</td>
</tr>
<tr>
<td>Oocytes nos. 2,</td>
<td>Rw: Rx</td>
</tr>
<tr>
<td>4, 6, 6, 10, 17...</td>
<td>R3: Ry</td>
</tr>
<tr>
<td>Third place</td>
<td>Rz: Rz</td>
</tr>
<tr>
<td>Oocytes nos. 11,</td>
<td></td>
</tr>
<tr>
<td>12, 13, 18, 19...</td>
<td></td>
</tr>
<tr>
<td>Fourth place</td>
<td></td>
</tr>
<tr>
<td>Oocytes nos. 14,</td>
<td></td>
</tr>
<tr>
<td>15, 20...</td>
<td></td>
</tr>
</tbody>
</table>

Oocytes were numbered according to the retrieval order.
D1-R1, D2-R2, D3-R3, D4-R4 = donor-recipient couples.
Rw, Rx, Ry, Rz = unrelated recipients (from the waiting list).

retrieval from each donor is carried out one after the other to enable recipients to be synchronized with different donors in successive cycles. The result of such an approach is avoiding freezing or having to destroy supernumerary embryos. In our experience (Figure 2), while the pregnancy rate per transfer (37%) is very similar to other effective programmes of oocyte donation, this approach made it possible to obtain a pregnancy rate of 106% by oocyte retrieval, i.e. avoiding wastage of this rare and precious commodity (Englert et al., 1996).

Of course, technical efficacy is not an ethical argument in itself, but it becomes so to some extent from the moment it reduces the shortage, one of the phenomena which most threaten the ethical aspects of a medical procedure. Now, for the first time in oocyte donation, the two systems exist side by side and this freedom left to the couple must be preserved absolutely (Weil et al., 1994). Indeed, this freedom of choice of an anonymous or non-anonymous treatment, restores to the future parents a choice which in fact should belong only to them: to decide, for their child, to reveal or not the secret of the donation, to guard or not the anonymity, to allow him or not to meet the oocyte donor. From this decision, they can then commit to one or another donation structure, meet oocyte donors who also have had to freedom to function anonymously or not. These studies show in effect that there are candidates for both procedures (Sauer et al., 1988; Power et al., 1990; Oskarsson et al., 1991; Robinson et al., 1991; Weil et al., 1994; Braverman and Corson, 1995). This freedom has the merit of taking from the medical professionals as from society, a power which they have wrongly assumed and which is a responsibility which must in priority fall to the parents who in our societies are the persons responsible for the children’s future and who moreover, in the end, are those who will have to face the consequences of this choice.

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