

Repetitive oocyte donation: a committee opinion

Practice Committee of the American Society for Reproductive Medicine and Practice Committee of the Society for Assisted Reproductive Technology

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This Committee Opinion concludes that donors be advised of the number of cycles/donations that a given oocyte donor may undergo. Although existing data cannot permit conclusive recommendations, a concern for the issues of the safety and well-being of oocyte donors warrants consideration. This document replaces the document of the same name, previously published in 2008 (Fertil Steril 2008; 90:S194–5). (Fertil Steril® 2014; ■: ■–■. ©2014 by American Society for Reproductive Medicine.)

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Donor cycles are relatively common in assisted reproductive technology (ART), and the annual number of cycles has increased over the years, comprising 15,973 cycles (approximately 10% of all ART cycles) in 2011 in the United States (1, 2). Women may choose to donate oocytes more than one time, giving rise to concerns about the optimal number of times that each woman should be permitted to donate, both to protect the health of the donor and to avoid issues of consanguinity. This discussion will address the issue of whether limits should be advised on the number of cycles/donations that a given oocyte donor may undergo. Although existing data cannot permit conclusive recommendations, concern for the safety and the well-being of oocyte donors warrants consideration.

The practice of oocyte donation has potential risks to the donor, including the risks of controlled ovarian stimulation, the oocyte retrieval procedure, and anesthesia, among others. Whereas the recipient derives a clear and tangible benefit from oocyte donation,

the donor derives benefit only through a sense of altruism and/or financial compensation for her services. Therefore, the question arises as to whether to limit the number of times that a given oocyte donor might donate her gametes. Despite the absence of definitive, long-term follow-up, there is nonetheless a motivation on the part of ART practitioners to develop a consensus for a prudent approach. Unusual circumstances should be considered on an individual basis before surpassing the maximum number of donations proposed by these suggested limits.

INADVERTENT CONSANGUINITY

Inadvertent consanguinity resulting from oocyte donation could occur if [1] a given donor has donated to two or more families and [2] the offspring were unaware of their specific genetic heritage. Previous documents on therapeutic donor insemination published by the American Society for Reproductive Medicine (ASRM) have advised an

arbitrary limit of no more than 25 pregnancies per sperm donor in a population of 800,000 to minimize the risk of consanguinity (3–5). Given that oocyte donation is a complex process and may result in cryopreserved embryos and an unpredictable number of pregnancies over a long period of time, it is reasonable to limit the number of donations rather than the number of pregnancies. The suggestions outlined here may require modification if the population using donor gametes represents an isolated subgroup or the specimens are distributed over a particularly small or wide geographic area.

HEALTH RISKS TO THE OOCYTE DONOR

Controlled Ovarian Stimulation

Controlled ovarian stimulation entails both known and potential risks. The risk of ovarian hyperstimulation syndrome (OHSS) is reported to be approximately 1%–2% per retrieval cycle. The incidence and severity of OHSS may in fact be lower in oocyte donors (6), in part owing to the absence of conception after stimulation. The use of final oocyte maturation with a GnRH agonist compared with the traditional use of hCG has been shown to dramatically reduce the risk of developing OHSS in

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oocyte donors in both large retrospective and smaller prospective studies (7–9).

Acute Procedural Risks

There are real, albeit small (<0.5%), risks of acute complications, including pelvic infection, intraperitoneal hemorrhage, or ovarian torsion (7, 10, 11). The risks associated with the low levels of anesthesia generally employed for oocyte retrieval in a young, healthy population should be very small. However, idiosyncratic reactions to anesthetic agents and other anesthetic complications (e.g., aspiration) may occur.

Cancer

While there continues to be concern that the use of controlled ovarian stimulation might increase the long-term risk of ovarian cancer (12), the preponderance of data does not demonstrate an association between the use of ovulation-inducing agents and cancer, in particular, ovarian and breast cancers (13, 14). Moreover, the current understanding of the pathogenesis of ovarian cancer is rapidly evolving, calling into question traditional theories of the relationship between nulliparity and ovarian cancer (15).

Future Ovarian Reserve of the Donor

It is not presently known whether repetitive follicular aspirations affect the donor's future ovarian reserve. Preliminary data indicate that repetitive and multiple cycles of oocyte donation do not decrease the donor's ovarian reserve as assessed by serum antimüllerian hormone levels (16).

Psychological Risks

Oocyte donation may entail potential psychological risks (ambivalence, regret, etc.) that might occur around the time of the procedure or years later. In addition, despite the intended anonymity of the donors, the donors should be counseled that they may come in contact with children conceived from their gametes in the future. These issues should be addressed during appropriate pretreatment screening and counseling.

While the risk of any of the adverse events discussed above is small, it is possible that the aggregate risk after a given number of procedures is additive. Therefore, based on these considerations, the Committee feels it is prudent to limit the participation of a given donor. Donors should be advised that, based on current practice, there are insufficient data to assure the lack of long-term problems beyond 6 cycles.

SUMMARY

- Oocyte donors are exposed to the risks of controlled ovarian stimulation, oocyte retrieval, and anesthesia.
- The risk of OHSS is estimated to occur in 1%–2% of donation cycles and may be further reduced by the use of GnRH agonists for triggering final oocyte maturation.
- The risk of serious acute complications associated with these procedures is small (<0.5%).

- As these are independent events, the cumulative risk of multiple procedures should be similarly low.
- The preponderance of data does not demonstrate a significant risk of future cancers in women undergoing stimulation and egg retrieval.
- While the data are limited, available evidence does not suggest that oocyte donation is associated with changes in the donor's ovarian reserve.

CONCLUSIONS

Currently, there are no clearly documented long-term risks associated with oocyte donation and as such no definitive data upon which to base absolute recommendations. However, because of the possible health risks outlined in the preceding discussion, it is prudent to limit the number of stimulated cycles for a given oocyte donor to 6.

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