

論文内容の要旨

論文題目： The decision-making process of the fate of frozen embryos for infertile women

和訳： 不妊女性の凍結胚処理方法における意思決定プロセス

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Abstract:

Background: The development of embryo cryopreservation and frozen embryo transfer has been useful for allowing future pregnancy attempts and reducing the risk of multiple pregnancies by limiting the number of embryos transferred. However, as a result, an enormous supply of embryos in storage has been reported worldwide, as is also the case in Japan. So, patients are faced with a decision at a certain point due to maintenance and cost of continuing storage. Options for embryo disposition vary between countries. For Japanese patients, the Japanese Obstetrics and Gynecology permits 3 options: continue storage (up until the woman's reproductive life), discard, and donate to research. Previous research suggests that the decision-making for the fate of the unused frozen embryos involves much emotional burden. Factors influencing this choice have been identified as:

conceptualization of the embryo, embryo moral status, gender, family issues, storage length, ethnicity and religion. Much of the previous studies were done using couples having Western backgrounds and focusing on the disposition decision rather than including the continue storage option. Therefore, the models made in the Western countries may not be applicable to our country where there are only three options (without the option to donate to other infertile couples) and for just women who are known to be more burdened physically and psychologically in terms of infertility. So, this study aims to ascertain the decision-making process of female patients and identify the socio-cultural factors that may be involved.

Methods: Our participants were those who received IVF treatment at the University of Tokyo, IVF Center and had embryos in storage for more than 3 years. After we quantified the number of patients who responded to our letter of storage expiration notice into those who decided to continue storage, discard, and donate to research, we did a semi-structured interview to the participants who responded to our recruitment letter. Ten Japanese women who continued storage, 5 who discarded and 16 who donated to research were recruited. The interviews were analyzed using a grounded theory approach for emergent themes and a decision making model was constructed.

Results: Out of the 128 letter of notice sent, 23 (17.9%) patients decided to continue storage, 33 (25.8%) decided to discard by responding, 43 (33.6%) decided to discard by not responding, and 29 decided to donate to research (22.7%).

From the 85 who responded (response rate: 66.4%), 31 agreed to the interview. Based on grounded theory, a model of the decision-making processes for the fate of frozen embryos consisting of 4

steps for those who continued storage and one additional step for those who discarded or donated to research was developed. The steps were as follows: 1) the embryo-transfer moratorium was sustained; 2) the “Mottainai”-embryo and another child were considered; 3) cost reasonability was taken into account; and 4) partner’s opinion was confirmed; separating those who continued from those who discontinued storage. For those who decided to discontinue, 5) effect of donation was then contemplated to decide whether to discard or donate to research. Although all steps involved emotional stress, greater psychological strain and conflict was especially expressed in steps 2, 4 and 5. Emergent throughout the entire decision-making process was an underlying theme: “coming to terms with infertility,” resulting in either acceptance or postponing acceptance of their infertility.

Discussion: This is the first research model from a non-western country, made on the decision-making process for the fate of cryopreserved embryos with 3 options: to continue storage, to discard or to donate to research. We found that great emotional burden was also felt by those who choose to continue embryo storage. In this study, we found new factors associated with this emotional burden different from those previously elucidated. A unique factor, “Mottainai”-embryo, was determined to be of critical importance to Japanese infertile women deciding the fate of their cryopreserved embryos. Furthermore, we found that coming to terms with infertility was an emergent central theme underlying the entire process, which made the decision even more difficult for many women.

Conclusions: In conclusion, this 5 step decision-making model with an underlying theme of “coming to terms with infertility,” makes an empirical contribution to understanding patients

deciding the fate of their frozen embryos. The influence of Japanese moral/ cultural values and beliefs were discovered to be inevitable in this process, reflected in the conceptualization of the embryos as well as in the 3 strategies to accept their infertility. These are suggestions for medical professionals and counselors to support not only the decision-making process of patients with stored embryos, but also the grief work of their reproductive loss, perhaps by respecting patients' pre-existing cultural beliefs. The results of this study contribute to the development of effective psychological support methods for patients with conflicts in deciding the fate of their frozen embryos.