SHORT COMMUNICATION

BALTIMORE, MARYLAND

Successful Triplet Pregnancy in a 51-Year-Old Woman After Oocyte Donation

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INTRODUCTION

Oocyte donation has allowed postmenopausal women to have an opportunity for childbirth. The medical literature for a triplet pregnancy in a postmenopausal woman is scarce (1). This is the second case report of a triplet pregnancy in a 51-year-old woman. This particular case is of interest because of the unusual and multiple conditions that were an obstacle to a successful pregnancy.

CASE REPORT

The recipient presented as a 50-year-old divorced white female, gravida 3, para 3-0-0-3, who had been menopausal since age 41 with no hormonal replacement therapy. She had remarried 3 years previously to a 42-year-old male (first marriage for him) who had not previously fathered a child. The couple decided that they wished to have a child together. The protocol for in vitro fertilization and donor oocyte was discussed with the couple, and they already had a known donor in mind. The donor chosen was the patient's daughter, a 30-year-old gravida 1, para 1-0-0-1, whose only child was 8 years of age. Both mother and daughter were in good general health, although both smoked cigarettes. The mother was advised to stop smoking and had a complete health screening physical examination with appropriate lab studies. The legal and ethical issues of the oocyte donation and insemination were

fully discussed and the informed consent process was completed. All parties agreed that the recipient and her husband would be the unquestioned parents of any successful pregnancy.

The In Vitro Fertilization Program at The Union Memorial Hospital has developed policies and protocols for both anonymous and known donor oocytes. This case was consistent with our existing policies which had been previously approved by our hospital administration.

Preliminary evaluation revealed the husband to be severely oligoasthenospermic, with low semen volumes (0.3–0.8 ml). A recipient mock cycle as described (2), performed on the patient using oral micronized estradiol and progesterone, produced a triple-layered endometrium of 12 mm by vaginal sonogram, and an endometrial biopsy was in-phase. The daughter was advised to stop smoking and had a complete health screening physical examination with appropriate lab studies. She underwent a standard ovulation induction protocol using a GnRH agonist for down regulation followed by intramuscular gonadotropin.

The first attempt of ovulation induction resulted in a canceled cycle because of a dead follicle. She had traveled from her home halfway across the country for that stimulation and returned after the cancellation. It was arranged that a physician in her area would provide sonography and estradiol levels for the next cycle of ovulation induction, and she would then travel back when it appeared that successful multiple follicular development was under way. The next stimulation was successful, and the patient and daughter were synchronized for transvaginal oocyte retrieval and endometrial preparation. A transvaginal ultrasound-guided oocyte retrieval was performed on July 29, 1995, with the harvest of six oocytes.

Due to the husband's poor semen parameters, all six oocytes were subjected to intracytoplasmic sperm injection, resulting in four 2-PNs, one 1-PN, and one 0-PN. Four four-cell embryos were transcervically returned to the patient 2 days after retrieval. Her first serum human β -chorionic gonadotropin level, obtained

14 days posttransfer, was 1716 mIU/ml, with a level of 5020 mIU/ml 2 days later. Ultrasound 6 weeks after transfer revealed three gestational sacs, each with a fetal pole showing cardiac activity. Progesterone vaginal suppositories were continued into the early second trimester. The patient elected not to undergo a selective reduction procedure, and her care was then transferred to her obstetrician.

The majority of her prenatal course was remarkably benign, with normal blood pressure, normal glucose screen, and normal weight gain. Serial sonograms indicated appropriate growth of the babies. She was placed on relative bed rest around week 21. She became edematous and uncomfortable in the early third trimester. By 33 weeks she had developed increased edema, mild pregnancy-induced hypertension, and severe respiratory distress in the supine position secondary to uterine distension. Ultrasound estimated all babies to weigh approximately 1800 g at the time and to have an oblique/breech/transverse presentation.

Cesarean section was performed at 33 weeks, with delivery of a live male/male/female set of triplets. Birth weights were 1906, 2040, and 1749 g, respectively. Only baby C had to be initially intubated overnight because of respiratory distress. The babies were able to go home 17 days later, one on an apnea monitor. The recipient was 51 years old at the time of delivery.

SUMMARY/CONCLUSION

Although there exists in the medical literature a series of over 50-year-old donor oocyte recipients who, by in large, had successful pregnancies (3), this case is reported because it is only the second report of a successful triplet pregnancy in a 51 year old. It is also reported because of the unusual circumstances of this conception. This is an unusual scenario involving oocyte donation from a daughter to a postmenopausal mother who also required intracytoplasmic sperm injection to achieve fertilization. Although the outcome in this case was good, a triplet pregnancy was

not the expected or the desired result. Transferring fewer embryos than four would certainly reduce the incidence of higher-multiple gestations and all the perinatal complications which can potentially occur. This is particularly true when the embryo quality is excellent and the endometrial receptivity has been maximized.

This report serves to demonstrate that as long as upper reproductive-aged women have been screened with a thorough medical evaluation, successful pregnancies can be achieved. It should be noted that if a woman reaches 50 years of age and is healthy, she can look forward to a life expectancy of 80 years (4).

Although cases such as this will likely remain controversial, it serves as an example of how far the techniques of assisted reproduction have come. It also provides a point of speculation as to how far they may yet develop.

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