



NATURAL CYCLE FROZEN EMBRYO TRANSFER IN A CASE OF PERSISTENT FLUID IN THE ENDOMETRIAL CAVITY

Dr. Suma Varsha Thota

Clinical head and Consultant, Ferty9 Fertility Center, Vijayawada, Andhra Pradesh, India.

Dr. Kanumuri Sindhu*

Fellow, Ferty9 Fertility Center, Vijayawada, Andhra Pradesh, India. *Corresponding Author

Dr. Pandirla Swathi

Fellow, Ferty9 Fertility Center, Vijayawada, Andhra Pradesh, India.

Dr. Nallani Veneela

Consultant, Ferty9 Fertility Center, Vijayawada, Andhra Pradesh, India.

ABSTRACT Fluid in the endometrium is not uncommon entity at the start of preparation of frozen embryo transfer, sometimes fluid can persist up to and including the day of frozen embryo transfer. Here we are reporting a case of 29 year old woman presented with secondary infertility with bilateral tubal block due to bilateral tubal ligation. Basic Pelvic ultrasound revealed fluid in the endometrium. Rest of the USG was normal. After explaining all the treatment options the couple opted for invitro fertilization with self oocytes and donor sperm as there was genetic abnormality in previous children. Controlled ovarian hyperstimulation was started, Oocyte retrieval was done. Patient was advised for day 2 review to start frozen embryo transfer protocol medicine. In spite of treatment with antibiotics and fluid aspiration from endometrial cavity, 3 cycles of Frozen embryo transfer were cancelled due to persistence of fluid. 4th cycle was tried as natural cycle Frozen embryo transfer, when patient came on day 14, endometrial thickness was 9mm triple line with no fluid in the endometrium. Day 5 Embryo transfer was done and patient conceived.

KEYWORDS : Fluid In The Endometrial Cavity, Natural Cycle, Frozen Embryo Transfer

INTRODUCTION

The interaction between the embryo and the intrauterine environment largely determines the success or failure of implantation, and successful implantation requires a receptive intrauterine environment for the embryos. There is a link between uterine pathology, decreased fertility, and spontaneous abortion (1). During in vitro fertilization (IVF) and embryo transfer (ET), the endometrial microenvironment is vital for successful implantation (2).

CASE STUDY

A 29 year old woman with 2 previous cesarean sections presented with secondary infertility with bilateral tubal block post bilateral tubectomy. Her general physical examination and per vaginal examination was found to be normal. Pelvic ultrasound was done which showed fluid in the endometrial cavity. There is no evidence of isthmocele.



Fig-1: USG Showing Fluid In Endometrial Cavity

MANAGEMENT AND OUTCOME OF CASE

The couple were counselled regarding treatment options and they wanted to go for IVF with donor sperm in view of tubal ligation and genetic abnormalities in previous children. Controlled ovarian hyperstimulation was started, oocytes were retrieved, and embryos were formed out of which 2 were blastocyst and 2 were day3 embryos. Patient was discharged and advised for review on day 2 of menstrual cycle for FET. On day 2 USG was done and Frozen embryo transfer medicine protocol was initiated. USG suggested fluid in endometrial cavity on day 12 and patient was started on antibiotics. Patient was reviewed few days later which again showed fluid in endometrium, so

cycle was cancelled. Patient came for 2nd cycle of Frozen embryo transfer, antibiotics were started on day 12 in view of persistent fluid in endometrium, fluid aspiration was done on day 16. On day 19 fluid in endometrium persisted so again cycle was cancelled. Patient came for 3rd Frozen embryo transfer cycle which again showed persistent fluid in the endometrium, fluid aspiration was done on day 9 and started progesterone injections for embryo transfer. But transfer was cancelled as there was fluid on day of transfer and patient was given antibiotics for 14 days and injection leuprolide was also given. Patient was advised to come on day 14 of her natural cycle which didn't show any fluid in cavity with Endometrial thickness of 9mm..



Fig-2: USG Showing No Fluid In Endometrial Cavity On Day 14 Of Natural Cycle Frozen Embryo Transfer

So, progesterone was started and day 5 embryo transfer was done. Her beta HCG turned out to be positive and later USG showed single live intrauterine gestation.

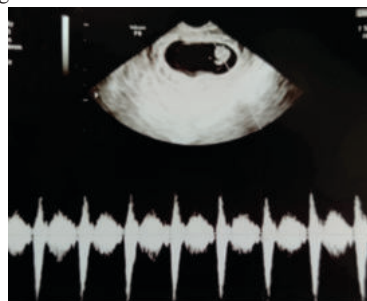


Fig-3: USG showing single intrauterine gestation

DISCUSSION

The causes and effects of Endometrial cavity fluid remain unclear. Previous studies have found that the production of Endometrial cavity fluid may be related to pathological conditions such as hydrosalpinx, polycystic ovary disease, or subclinical uterine infection, or may be caused by the physiology of the reproductive tract(3). Proper treatment of Endometrial cavity fluid affects the success of Embryo transfer and the final pregnancy outcomes of patients subjected to IVF/ICSI. It has been suggested that Endometrial cavity fluid should be treated individually according to the causes, appearance, time, and amount in patients undergoing IVF/ICSI(4). To optimize implantation, several methods for endometrium preparation have been proposed. There is still a lack of evidence to show any benefit, or to identify which method of endometrium preparation in Frozen embryo transfer is more effective than another (5). In this case we preferred to make use of natural cycle embryo transfer as there was persistent fluid in endometrial cavity for 3 cycles, which has given a positive outcome. Natural endometrium in Frozen-thawed Embryo Transfer (FET) may have some benefits upon implantation.

CONCLUSION

In conclusion, the natural cycle may give a good chance of clinical pregnancy in comparison with the stimulated cycle in patients with endometrial cavity fluid.

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