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CLINIQUE

# DOES OVARIAN STIMULATION WITH LETROZOLE OR CLOMIPHENE CITRATE IMPROVE LIVE BIRTH RATES IN DONOR INSEMINATION CYCLES FOR SAME-SEX FEMALE COUPLES?



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## OBJECTIVE

### Introduction

Intrauterine Insemination (IUI) with cryopreserved donor sperm (DS-IUI) is a commonly used fertility treatment for same-sex female couples seeking pregnancy. However, there is no consensus on the first-line treatment for this specific population of women with no prior history of infertility. We decided to assess whether IUI should be performed in a natural unstimulated cycle (NC) or following ovarian stimulation (OS) with oral agents (clomiphene citrate (CC) or letrozole).

### Methods

A retrospective cohort study was performed at the **clinique ovo** (university-affiliated private IVF center) between January 2011 and May 2014. All DS-IUI cycles of women in same-sex relationships with regular menstrual cycles were reviewed. Patients  $\leq 40$  years with no history of infertility were included and only the first three treatment cycles were analyzed for each patient. All women had an ovarian reserve testing (FSH, antral follicle count, AMH) with at least one patent tube. Patients with polycystic ovarian syndrome according to the Rotterdam criteria were excluded. OS was achieved using either CC 100 mg/day or letrozole 5 mg/day from cycle day 3 to 7. The choice of treatment was left to the physician's discretion. In total, 540 IUI cycles in 236 women were included. Our primary outcomes were live birth rate per started cycle (LBR), cumulative LBR and twin pregnancy rate. Secondary outcomes were clinical pregnancy rate per started cycle (CPR) (ultrasonography with fetal cardiac activity at 7 weeks), miscarriage and cycle cancellation rates.

## RESULTS

We compared 280 OS cycles (166 CC and 114 letrozole) in 125 women to 260 NC in 111 women. The two groups were similar for age, body mass index and ovarian reserve as well as quality of the inseminated sperm. Results are shown in Table 1. Even though the CPR was significantly higher in the OS group, there was no difference in the LBR between the two groups. The twin pregnancy rate was significantly higher in the OS group.

Table 1.

	OS group (n=280)	NC group (n=260)	p value
Cycle Cancellation rate	1.8% (5/280)	0.8% (2/260)	p= 0.30
CPR	20.7% (58/280)	13.8% (36/260)	p= 0.03
Miscarriage rate	19% (11/58)	11.1% (4/36)	p= 0.31
LBR	16.1% (45/280)	12.3% (32/260)	p= 0.21
Cumulative LBR	36% (45/125)	28.8% (32/111)	p= 0.24
Twin pregnancy rate	10.3% (6/58)	0% (0/36)	p = 0.04

X<sup>2</sup> tests were used to assess for differences between groups.

## CONCLUSIONS

In women in same-sex couples with regular menstrual cycles and no history of infertility undergoing DS-IUI, live birth rates are comparable between ovarian stimulation and natural cycles, but twin pregnancy rates are significantly higher following stimulation.