

EFFICACY OF ASSISTED HATCHING ON PREGNANCY RATE IN FROZEN-THAWED BLASTOCYST TRANSFER

N. Kostromina, V. Zdanovsky, N. Kostromina, V. Gordeeva
Infertility Treatment Center, EKO, Moscow, Russia

Cryopreservation of embryos is an integral part of assisted reproduction techniques (ART). Efficiency of this procedure can be increased by means of partial dissection of zona pellucida using assisted hatching (AH). Recently, considerable number of investigations was devoted to studying applications of AH to transfer of frozen-thawed embryos on early cleaved stage. However, studies on efficiency of AH applied to frozen-thawed blastocysts are not numerous still.

The present work study the pregnancy rate in IVF/ICSI cycles with frozen-thawed blastocysts for 140 sterile patients aged from 23 to 46 years in the period from January 2008 till November 2009. The patients were divided into two groups: group 1 comprised 69 patients whose blastocysts were subjected to AH before transfer; group 2 included 71 patients without such treatment and was control. The groups did not differ significantly with regards to patient age, number and quality of transferred embryos.

Blastocysts were cryopreserved according to the standard procedure suggested by «Cook©» (Australia) in the Cryologic4 system (Australia). AH was performed in 30 min after thawing using a 1480 nm diode non-contact infrared laser (The Hamilton Thorne Zilos-tkTM, USA).

The results of the present survey show that laser assisted hatching has a positive effect on the clinical pregnancy rate. The clinical pregnancy rate in the treated group was 39.1% comparing to 29.6% in the control ($p < 0.05$).

We conclude that laser assisted hatching of frozen-thawed blastocysts is an effective procedure which can considerably increase the pregnancy rate in assisted reproduction techniques.