

COMPARISON OF OUTCOMES BETWEEN CONVENTIONAL ICSI AND INTRACYTOPLASMIC MORPHOLOGICALLY SELECTED SPERM INJECTION (IMSI) IN PATIENTS WITH TERATOSPERMIA

Chun-Chia Huang¹, Hsiu-Hui Chen¹, Chung-I Chen¹, Ming-Chou Hung¹, Lii-Sheng Huang², Maw-Sheng Lee³

¹ Division of Infertility, Lee Women's Hospital (Taiwan)

² Institute of Medicine, Chung Shan Medical University (Taiwan)

³ Department of Obstetrics and Gynecology, Chung-Shan Medical University Hospital (Taiwan)

Introduction: In the present study was to assess of the outcomes of intracytoplasmic morphologically selected sperm injection (IMSI, CytoScreen IMSI, OCTAX) and the conventional ICSI procedure in patients with severe teratospermia (<4%).

Methods: There were 83 patients with teratospermia underwent IVF in this study and they were further divided into two groups: IMSI (n=37 cycles) and conventional ICSI (n=46 cycles). Subsequently, in IMSI group, the sperm selection was realized at high magnification (~6300×) by the inverted microscope and oocytes within one cycle were injected by motile spermatozoa with normal morphology and intact nuclei.

Results: There were no significant differences between the IMSI and conventional ICSI in terms of the female age (37.8 ± 3.8 vs. 36.8 ± 2.8), fertilization rates ($78.7 \pm 27.7\%$ vs. $74.4 \pm 31.2\%$), day 2 good embryo rates ($42.6 \pm 35.7\%$ vs. $46.2 \pm 34.2\%$) and embryo transfer number (2.8 ± 1.0 vs. 2.8 ± 1.1), but the embryo transfer cancel (without cleavage embryo for transfer) rate in conventional ICS (10.9% , 5/46) was significantly higher than IMSI group (0% , 0/37; $P < 0.05$). The pregnancy rate per cycle in IMSI group (24.3% , 9/37) was higher than ICSI group (19.6% , 9/46) but no significantly difference.

Conclusion: A new method of real-time high magnification in IMSI procedure is a usefully approach to observe morphology and nuclei of sperm and decrease embryo transfer cancel rate in patient with teratospermia.