

COMPARISON OF OUTCOME OF THE TREATMENT IN PATIENTS WITH OBSTRUCTED AZOOSPERMIA USING MICROSURGICAL EPIDIDYMAL SPERM ASPIRATION(MESA) AND TESTICULAR SPERM EXTRACTION(TESE)

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Purpose: To compare the outcome of male factor ICSI cycle using MESA with TESE for patients with obstructive azoospermia.

Materials and Methods: We analyzed retrospectively obstructive azoospermia with ICSI cycles between January 1, 2003 and December 31, 2008 in Chang Gung Memorial Hospital. A total of eighty azoospermia patients underwent ICSI-ET programs. We divided into four groups according to the procedures of sperm retrieval: MESA-fresh, MESA-thawed, TESE-fresh, and TESE-thawed. Parameters including normal fertilization rate, implantation rate, pregnancy rate and live-birth rate were analyzed.

Results: In a total of eighty cycles with azoospermia, 38 cycles of MESA-fresh, 18 of MESA-thawed, 19 of TESE-fresh, 5 of TESE-thawed were enrolled. The overall normal fertilization rate and implantation rate were 61.6% and 19.0%. The overall clinical pregnancy rate and live birth rate were 41.6% and 33.8%. No significant differences were found in fertilization rate, implantation rate, pregnancy rate or live birth rate among the azoospermia group or non-azoospermia group (control group). There were significant differences in normal fertilization rate, implantation rate, and clinical pregnancy rate using MESA and TESE (63.8% vs 56.5%, 23% vs 11.9%, 45.5% vs 31.8%, $P < 0.05$). However, the TESE and MESA had similar live birth rate. There was no difference between cycles using fresh or frozen-thawed sperm in term of fertilization, implantation, clinical pregnancy, and live birth rates. There was no congenital anomaly and only one case had twin to twin transfusion syndrome and aborted at gestation age of twenty.

Conclusion: The present data showed the treatment of azoospermia patients using MESA resulted in satisfied embryo fertilization rates and better pregnancy outcome in comparison to the TESE. The use of MESA and TESE in good candidates for azoospermia in ICSI cycles resulted in reasonable pregnancy and live birth rates comparing with non-azoospermia group.