

PD58-11
MICRODISSECTION TESTICULAR SPERM EXTRACTION PRACTICE PATTERNS FOR MALE INFERTILITY PROVIDERS: WHAT ARE THE BARRIERS TO PERFORMING FRESH VERSUS FROZEN?

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INTRODUCTION AND OBJECTIVE: Reproductive urologists' practice patterns related to microdissection testicular sperm extraction (microTESE) are unknown. We surveyed providers that perform this operation to better understand practice patterns and barriers.

METHODS: A 22-question anonymous survey was emailed to reproductive urologists who are members of the Society for Study of Male Reproduction. Descriptive statistics and chi-squared analysis comparing fresh and frozen microTESE were performed. Using logistic regression analysis, we determined significant predictors of performing fresh microTESE for non-obstructive azoospermia (NOA).

RESULTS: A total of 208 surveys were sent with 76 responses received (response rate 36.5%). A majority of respondents are fellowship trained (86.8%) and work in academia (60%). Most (63.2%) perform frozen microTESE for NOA, while 44.7% perform fresh. MicroTESE is performed most often at non-fertility surgical centers (59.2%). An on-site andrologist is present for real-time tissue evaluation for 57.7% of these respondents. The most common reported barriers to performing microTESE are cost (44.7%), scheduling difficulties (34.2%), and andrologist availability (15.8%). There are no significant differences between the identified barriers and urologists' preference for performing fresh vs. frozen microTESE on chi-squared analysis. The majority (87.5%) of those performing microTESE at a fertility surgical center prefer fresh, while only 12.1% of those at non-fertility surgical centers prefer fresh ($p < 0.001$). On univariable logistic regression analysis, those who perform microTESE at a fertility surgical center are >50 times more likely to use fresh sperm (OR 50.8, 95% CI 4.9-527.7, $p = 0.001$) vs those at a non-fertility surgical center.

CONCLUSIONS: There are wide variations and a variety of barriers among reproductive urologists' practice patterns related to microTESE. Frozen microTESE is performed more commonly than fresh, most often at non-fertility surgical centers, and most urologists do not have an onsite andrologist present to evaluate the sample in real-time. Urologists who perform microTESE at a fertility surgical center are more likely to perform them fresh. Location-specific factors appear to be a primary determinant as to whether microTESE is done fresh or frozen.

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PD58-12
FERTILITY OUTCOMES AND PREDICTORS FOR SUCCESSFUL SPERM RETRIEVAL AND PREGNANCY IN 327 AZOOSPERMIC MEN WITH A HISTORY OF CRYPTORCHIDISM WHO UNDERWENT MICRODISSECTION TESTICULAR SPERM EXTRACTION

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INTRODUCTION AND OBJECTIVE: We investigated fertility outcomes and predictors for successful sperm retrieval and pregnancy in azoospermic men with a history of cryptorchidism who underwent microdissection testicular sperm extraction (mTESE).

METHODS: The study included 327 azoospermic men with a history of cryptorchidism who underwent mTESE. All patients had preoperative hormone evaluation, semen analysis, genetic tests and physical examination and radiologic imaging for the localization and measurement of the testes. mTESE was performed to find mature sperm for intracytoplasmic sperm injection from one or both testes. Fertility outcomes including sperm retrieval, fertilization rate, number of transferred embryos, pregnancy, miscarriage and live birth rates were recorded. In addition, a logistic regression analysis was applied to investigate factors that might predict successful sperm retrieval and pregnancy.

RESULTS: The mean age of the patients was 34.28 ± 7.29 years, and the mean age at the orchidopexy was 12.49 ± 8.25 years. At the beginning, 157 (48%) had unilateral cryptorchidism and 170 (52%) had bilateral cryptorchidism. Of the patients, 273 (83.5%) had orchidopexy, and 54 (16.5%) had no surgery related to undescended testis. Sperm retrieval was observed in 172 (52.6%) of the patients. The mean fertilization, pregnancy and live birth rates were 55.2 ± 20.5 , 53.5%, and 44.8%, respectively. Logistic regression analysis showed that localization of the testis, orchidopexy age, testicular volume and serum total testosterone level were significant predictors to find testicular sperm. The sperm retrieval rate was significantly higher at the orchidopexy age of ≤ 9.5 years (70.8%) than the orchidopexy age of > 9.5 years (42.1%) ($p = 0.000$). Patients with total testicular volume of ≥ 13.75 ml had significantly higher sperm retrieval rate (65.2%) than the patients with total testicular volume of < 13.75 ml (45.5%) ($p = 0.001$). Patients with total testosterone level of ≥ 300.5 ng/dl had significantly higher sperm retrieval rate (65.6%) than the patients with total testosterone level of < 300.5 ng/dl (40.3%) ($p = 0.000$). Patients with follicle stimulating hormone (FSH) level of ≤ 17.25 mIU/ml had significantly higher sperm retrieval rate (72.3%) than the patients with FSH level of > 17.25 mIU/ml (44.4%) ($p = 0.000$). Younger male and female ages, and higher fertilization rates were the parameters that might predict pregnancy.

CONCLUSIONS: Infertile azoospermic men with a history of cryptorchidism have high sperm retrieval rate with mTESE. Patients who had orchidopexy at the age of ≤ 9.5 years, and having total testicular volumes of ≥ 13.75 ml with total testosterone level of > 300.5 ng/dl and FSH level of ≤ 17.25 mIU/ml have higher success rate for sperm retrieval. Therefore, azoospermic patients with a history of cryptorchidism should be informed based on these findings before the mTESE procedure.

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