

with TMC ≤ 5 million were not significantly lower than those with >5 million in this investigation. Physicians should consider treatment with IUI even with very low TMC in semen preparation.

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INFERTILITY AND SPERM SEX RATIO IN U.S. MEN. M. L. Eisenberg, R. C. Walters, D. J. Lamb, L. I. Lipshultz. Urology, Baylor College of Medicine, Houston, TX.

OBJECTIVE: In recent years, investigators have noted a trend toward a declining proportion of male births in many industrialized nations. Over the same time period, a possible decline in semen quality has also been suggested and investigators have hypothesized that the two phenomena may be related. However, the potential association of these two findings remains uncertain. While men bear the sex determining chromosome, the role of the female partner as it pertains to fertilization or miscarriage may alter the gender ratio. We attempted to determine a man's secondary sex ratio (F1 generation) by directly examining the sex chromosomes of his sperm.

DESIGN: Cross sectional design.

MATERIALS AND METHODS: After IRB approval, we examined our database for all men who had undergone a semen FISH (fluorescence in situ hybridization) from July 2003 to December 2010. Patient demographic and semen parameters were recorded. Chi squared analysis was used to compare gender ratios (Y chromosomes: total chromosomes). Multivariable logistic regression was used to predict the odds of possessing a Y bearing sperm after accounting for demographic and semen parameters.

RESULTS: Results

A total of 186 men (mean age 37.9 ± 6.4) underwent semen FISH. A mean of 669 sperm were analyzed for each male. The median sperm density was 33.8 million per mL (range 0-227) with a total motile sperm count of 51 (range 0-349) million sperm. For the entire cohort, the proportion of Y chromosome bearing sperm was 51.5%. Men with less than five million motile sperm had a significantly lower proportion of Y chromosome bearing sperm (50.7%) compared to men with higher sperm counts (51.6%, $P=0.02$). After adjusting for age, aneuploidy, and time period of semen analysis, a higher motile sperm count significantly increased the odds of having a Y chromosome bearing sperm ($P<0.01$).

CONCLUSION: As a man's sperm production declines, so does the proportion of Y chromosome bearing sperm. Thus, a man's reproductive potential may predict his ability to sire male offspring.

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SPERM RECOVERY IN INFERTILE MEN WITH VARICOCELE-ASSOCIATED AZOOSPERMIA: RESULTS OF 12 MONTHS FOLLOW UP AFTER VARICOCELE REPAIR. R. Saleh, A. Agarwal, H. Farouk, A. Abd El Hamed, A. Abd El Latif. Department of Dermatology, Venereology and Andrology, Sohag Faculty of Medicine, Sohag, Egypt; Glickman Urological Institute, Cleveland Clinic, Cleveland, OH; Department of General Surgery, Sohag Faculty of Medicine, Sohag, Egypt.

OBJECTIVE: The objective of this study was to examine post-varicocelectomy sperm recovery in infertile men with varicocele-associated NOA and its relation with histological patterns of testicular biopsies (TB).

DESIGN: Prospective study.

MATERIALS AND METHODS: The study included 48 infertile men with azoospermia and bilateral varicocele. Serum levels of follicle stimulating hormone (FSH) were measured. Patients underwent bilateral varicocele repair through sub-inguinal approach. Intra-operative TB were taken for histological evaluation. Postoperative semen analysis was performed at 3, 6, 9 and 12 months.

RESULTS: Based on TB, 16 patients had hypospermatogenesis, 19 had maturation arrest (10 at spermatid and 9 at primary spermatocyte) and 13 had Sertoli cell only (SCO) pattern. Out of the 48 patients, 14 (29%) (Group1) had positive sperm recovered in their ejaculates within 12 months following varicocele repair (5 with hypospermatogenesis, 3 with arrest at spermatid and 6 at primary spermatocyte). Sperm concentration ranged from 0.2 to 25 m/mL and motility from 0 to 60%. Two patients with maturation arrest reported natural pregnancies. Out of the 34 patients with negative postoperative sperm recovery, 21 (Group2) had hypospermatogenesis (n = 11) or arrest at spermatid (n = 7) or primary spermatocyte (n = 3). None of the 13 patients with SCO pattern (Group3) had postoperative sperm recovery. Comparison between the 3 study groups is shown in table1.

TABLE 1. Comparison between the 3 study groups.

Parameter	Group1 (n = 14)	Group2 (n = 21)	Group3 (n = 13)	P (1 vs 2)	P (1 v 3)	P (2 vs 3)
Age (Yrs)	36 \pm 7	36 \pm 7	31 \pm 6	0.6	0.2	0.05
FSH (mIU/mL)	6 \pm 4	6 \pm 4	18 \pm 6	0.7	0.001	0.001
Rt Testis Volume (mL)	16 \pm 2	16 \pm 4	13 \pm 4	0.3	0.03	0.01
Lt Testis Volume (mL)	17 \pm 2	17 \pm 4	13 \pm 3	0.7	0.01	0.01

Values are mean \pm SD. $P<0.05$ was significant

CONCLUSION: Varicocele repair resulted in sperm recovery in 29% of infertile men with clinical varicocele and NOA. Post-varicocelectomy sperm recovery is likely in azoospermic men with hypospermatogenesis or maturation arrest; and not in men with SCO pattern.

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MICROSURGICAL VERSUS CONVENTIONAL SINGLE-BIOPSY TESTICULAR SPERM EXTRACTION IN NONOBSTRUCTIVE AZOOSPERMIA: A PROSPECTIVE CONTROLLED STUDY. S. Verza, Jr S. C. Esteves. ANDROFERT - Andrology & Human Reproduction Clinic, Campinas, SP, Brazil.

OBJECTIVE: To compare the success rates of sperm retrieval using either microsurgical testicular sperm extraction (micro-TESE) or conventional testicular sperm extraction (TESE) in a group of men with nonobstructive azoospermia (NOA).

DESIGN: Prospective and controlled study.

MATERIALS AND METHODS: Sixty men with NOA were enrolled in this study and each patient served as his own control. For conventional TESE, two large (6x6x6 mm) biopsies of random testicular parenchyma were obtained. One biopsy specimen was sent for pathology examination and classified according to the predominant histological pattern, i.e., Sertoli-cell only (SCO), maturation arrest (MA) and hypospermatogenesis (HYPO), while the other was dissected and examined for the presence of sperm in the embryology laboratory (EL). After that, the testicular microdissection was carried out as described by Schlegel (1998), with minor modifications. Tubules were sent to the EL for sperm search. Successful sperm retrieval (SSR) rates, both overall and stratified by histology category, were compared between conventional and microsurgical TESE.

RESULTS: Overall, the SSR rate was significantly higher using micro-TESE (27/60; 45%) as compared to TESE (15/60; 25%; $P=0.02$). In successful retrievals, a positive retrieval with TESE was always coupled with a positive one by micro-TESE. SSR rates according to testicular histology results were 92.9% (13/14), 63.6% (7/11) and 20.0% (7/35) in the subgroups of HYPO, MA and SCO, respectively. In addition, micro-TESE success rates were significantly higher than TESE in all testicular histology categories of HYPO (92.9% micro-TESE; 64.3% TESE), MA (63.6% micro-TESE; 9.1% TESE) and SCO (20% micro-TESE; 5.7% TESE) ($P<0.01$).

CONCLUSION: Micro-TESE is a better method to retrieve spermatozoa from men with NOA than conventional single-biopsy TESE. SSR rates in NOA, either by micro-TESE or TESE, are correlated to the testicular histopathology results. Regardless of testicular histology category, micro-TESE yields higher SSR rates than TESE.

OUTCOME PREDICTORS-CLINICAL: ART

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ONGOING IMPLANTATIONS AND BABY RATE PER VITRIFIED OOCYTE DURING THIRD PARTY REPRODUCTION USING GAMETES FROM AN EGG BANK. P. Patrizio, P. D. Bernal, J. Kahn, C.-C. Chang, D. Shapiro, P. Z. Nagy. Yale Fertility Center, New Haven, CT; Reproductive Biology Associates, Atlanta, GA.

OBJECTIVE: To investigate the ongoing oocyte to implantations and baby rate in a donor/recipient program using oocytes banked by vitrification.

DESIGN: Retrospective analysis of clinical and embryological database.

MATERIALS AND METHODS: A total of 290 recipients of oocyte donation cycles from 88 donors (112 cycles) who banked a total of 2078 MII oocytes by vitrification were analyzed. Main outcomes measured were the total number of metaphase II oocytes vitrified/rewarmed, the number of embryos transferable