

MP44-20 - Influence of sperm retrieval methods on in vitro fertilization outcomes in patients presenting with Cryptozoospermia.

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INTRODUCTION AND OBJECTIVES

There is some controversy in literature regarding the outcomes of in vitro fertilization (IVF) using ejaculated versus testicular spermatozoa obtained from patients presenting with severe oligoasthenoteratozoospermia. Recently some studies have brought to light evidence that the use of testicular sperm might be related to higher implantation, pregnancy and birth rates among men with male factor infertility. Testicular sperm extraction however is an invasive procedure that is not free from complications such as bleeding/hematoma, infections and even testicular atrophy.

The aim of this study is to evaluate the influence of sperm retrieval methods on IVF outcomes in patients presenting with cryptozoospermia from a large volume infertility center in Brazil.

	Group 1 Ejaculate	Group 2 - Testicular	p value
n	159	44	
Age ♂	37.25	34.29	0.32
Age ♀	36.16	33.3	0.30
Oocyte (n)	8.45	9.05	0.58
Embryos (n)	1.17	1.68	0.21
Testosterone	435.88	538.56	0.22
FSH	12.35	11.73	0.75
LH	6.67	7.6	0.42

Table 1 – Groups 1 and 2 demograpics and characteristics

METHODS

Medical couples records presenting cryptozoospermia who underwent intracytoplasmic sperm injection (ICSI) cycles with either ejaculated or testicular sperm between January 2005 and December 2018 at Idéia Fértil Institute/ABC Medical School were analyzed. Couples with virtual azoospermia and/or poor ovarian response were excluded. Data were separated in two groups according to the sperm recovery technique: Group 1 - ejaculated sperm recovery; Group 2 - Testicular sperm retrieval. In Group 2, sperm was retrieved by both testicular sperm extraction (TESE) or the testicular sperm aspiration (TESA). In all the patients, sperm retrieval from ejaculate was performed prior to surgical retrieval. Demographic data; pregnancy, miscarriage, live birth rates were analyzed. Student's t test and Chi-Square test were used to assess quantitative and categorial variables respectively. Significance level was defined as 0.05. with 95% confidence level. SPSS software (IBM® SPSS® Statistics 20; SPSS, Inc., Chicago, IL, USA) was used for calculation.

RESULTS

There were no statistical difference on demographic data from Group 1 vs Group 2. (Table 1) 223 IVF cycles were included. The overall pregnancy rate was 23.3% and the live birth rate was 21.1%. Group 1 included 159 cycles with a pregnancy rate of 25.8% and a live birth rate of 23.2%. Group 2 included 44 cycles with a pregnancy rate of 20.4% and a live birth rate of 18.2%. Fourteen cycles of patients undergoing TESE were excluded because no spermatozoa was recovered. Additional 6 patients were excluded due to the use of sperm from donation without any attempt of testicular sperm retrieval. There was no statistical difference between the groups regarding pregnancy rate (p 0.27) or live birth rate (p 0.26). The sperm count and sperm motility in the initial sperm sample correlated inversely with the chance of need to perform TESE (statistically significant) and samples with more than 6 mobile sperm or more than 30 total sperm had a much lower chance of TESE. In addition, samples in which any sperm concentration was obtained after centrifugation had a lower chance of TESE with statistical significance. There were no baseline difference between the groups. Miscarriage rates on Groups 1 and 2 were 9.76% and 11.11% respectively, with no significant statistical difference.

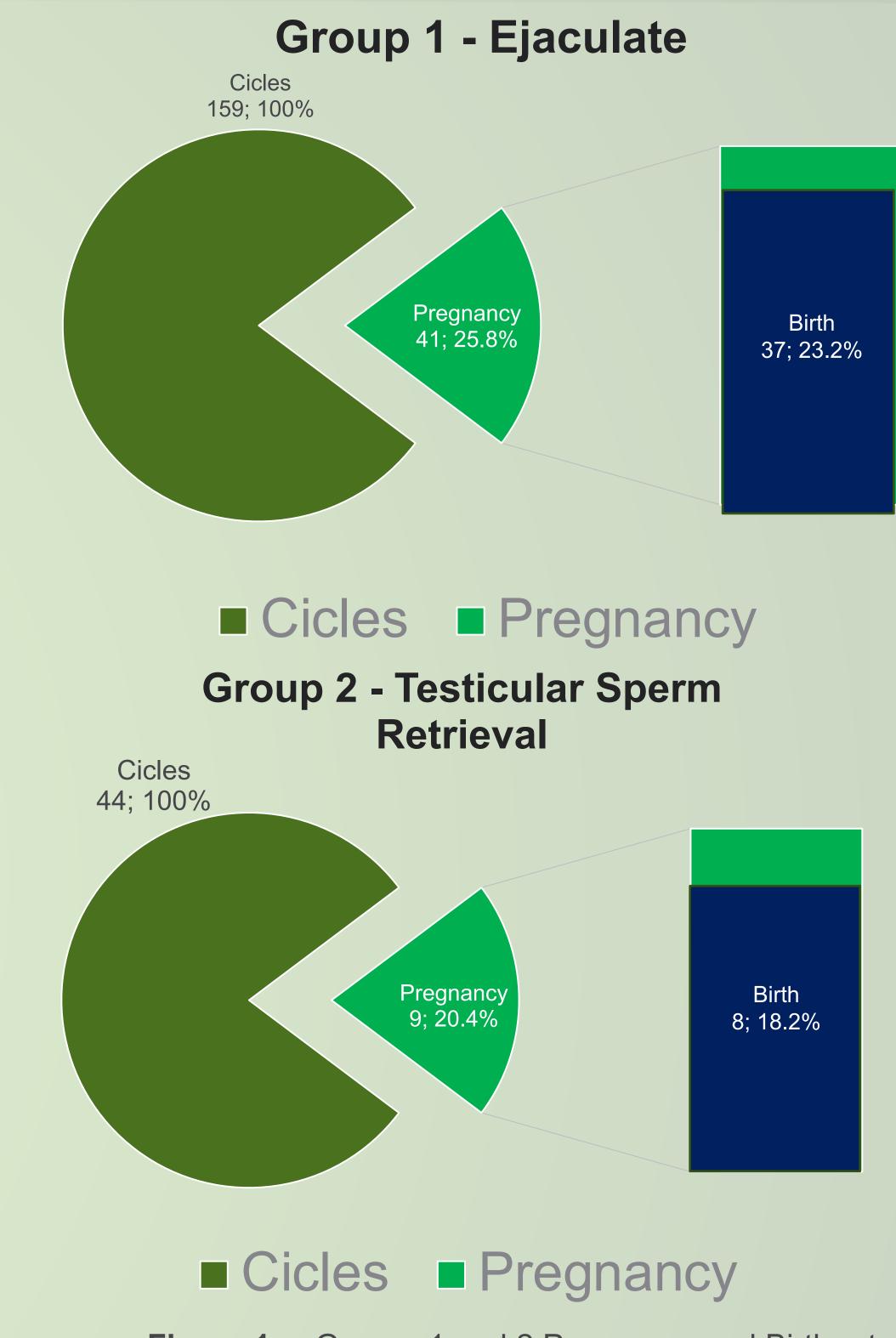


Figure 1 – Groups 1 and 2 Pregnancy and Birth rates

CONCLUSION

We report the results of ICSI using ejaculate or testicular spermatozoa from a large volume center in Brazil the last fourteen years. There was no statistical difference on pregnancy and birth rates between ejaculate and testicular sperm in the present series. This study adds up to the literature regarding the treatment of couples with male factor infertility. This study has some limitations, specially related to the retrospective design. There is still need of further investigation on this topic, mainly in a prospective and controlled setting.

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