8. HISTOLOGICAL OUTCOME AFTER CONVENTIONAL TESTICULAR SPERM EXTRACTION VS MICROSURGICAL TECHNICS IN PATIENTS WITH AZOOSPERMIA

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Introduction. The 2021 AUA/ASRM Guidelines on Diagnosis and Treatment of Infertility in Men recommend micro-TESE for men with NOA undergoing sperm retrieval. The 2021 European Association of Urology (EAU) Guidelines on Male Sexual and Reproductive Health recommend conventional or micro-TESE.

Aim of study. The study aimed to perform a comparative analysis of the success sperm retrieval rate and histological outcome between tissue samples obtained through conventional and micro-TESE.

Methods and materials. The study included 45 men with a mean age of 33.4±5.6 years. According to the internal protocol, patients with presumed obstructive azoospermia underwent conventional TESE (22 men), while those with non-obstructive azoospermia underwent micro-TESE (23 men). The criteria for presuming the type of azoospermia were: medical history, testicular volume, hormones and genetic findings. A comparative analysis of the success sperm retrieval rate and histological outcome was conducted in both groups.

Results. In the group undergoing classical extraction intervention, the success sperm retrieval rate was 81.8% (18), respectively 18.2% (4) yielding a negative result. Histological analysis revealed normal spermatogenesis in 68.2% (15), reduced spermatogenesis in 22.7% (5), and maturation arrest in 9.1% (2). We observed that 9.1% (2) with reduced spermatogenesis had a negative success rate due to the classical method used. In the group subjected to micro-TESE methods, the success rate was 21.7% (5) versus 78.3% (18) where sperm cells were not identified. Histological examination identified mixed atrophy in 13.6% (3), hypo-spermatogenesis in 8.7% (2), Sertoli cell-only syndrome in 56.5% (13), and tubular fibrosis in 21.2% (5).

Conclusion. Both conventional TESE and micro-TESE are effective methods when patients are pre-selected based on the presumed type of azoospermia. For better efficacy, the possibility of switching to the microsurgical method should be considered for patients planned for the classical method.