

Re: Baser et al.: Factors Affecting TESE Success in Infertility Treatment: Preliminary Results of Single-Center Experience [Grand J Urol 2021;1(1):1-5]

Re: Baser ve Ark.: İnfertilite Tedavisinde TESE Başarısını Etkileyen Faktörler: Tek Merkez Deneyimi Ön Sonuçları [Grand J Urol 2021;1(1):1-5]

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Dear Editor,

We have read with great interest the study entitled “Factors Affecting TESE Success in Infertility Treatment: Preliminary Results of Single-Center Experience” published in the first issue of your journal [1]. Both techniques are very common in daily urology practice.

Epigenetic changes already create many problems that we will insidiously pass to the next generations. One of the most obvious consequences of epigenetic disorders affecting the male gender is the deterioration in sperm parameters. Decrease in sperm parameters and fertility rates have necessitated acceptance of lower sperm parameters as criteria of fertility compared to those defined by WHO [2]. The decreased sperm parameters and even the absence of sperm in the ejaculate (nonobstructive [NOA] or obstructive azoospermia) have led to the birth of new sperm retrieval methods. Microdissection testicular sperm extraction (micro-TESE, mTESE) which is a surgical sperm retrieval method under local anesthesia with the aid of a magnifying glass was first defined by Schlegel in 1999 [3].

The success rate of mTESE even in experienced hands is around 50%. The selection criteria of study population in published reports also directly affect the success rates. In particular, success rate increases in studies in which patients with chromosomal abnormalities are excluded [4]. Nevertheless, such a high success rate of 100% in this study may not be explained by only excluding patients with Klinefelter and/or Sertoli cell-only syndrome from the study. As stated, the creation of a large population in the planning phase of the study will result in rates

compatible with the literature. Also in order to expound the study design more clearly, the indications that were taken into consideration when TESE or mTESE was preferred between the two groups, and previously applied assisted reproductive technologies should be displayed in detail.

One of the arguments used to predict success of mTESE was the FSH level in the blood. In large series, although increased FSH levels in infertile men have been shown to be associated with impaired spermatogenesis, a low-to-moderate relationship between sperm recovery rates and FSH elevation could be shown [5]. The value of genetic examination is strongly proven in predicting sperm recovery rates other than FSH in patients scheduled for TESE. Although not specified in this study, it is important to search for Y chromosome deletion in the patient population with nonobstructive azoospermia before TESE. In the etiology of infertility, the most common genetic defect after Klinefelter syndrome is Yq microdeletion and the defects in the AZF gene region are very useful in predicting sperm retrieval. Thanks to a pre-procedural genetic examination, medical conditions where it is impossible to obtain sperm can be detected and unnecessary morbidity can be avoided.

In NOA cases, especially in patients with genetic disorders, mTESE can effectively find spermatozoa and minimize the risk of complications. Nevertheless, more research is required to better understand the complex pathophysiology underlying NOA and to find more accurate predictors of sperm recovery rates.

Sincerely yours,

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References

- [1] Baser A, Ozturk MI, Dogan M, Ekici M, Yaytokgil M, Baykam MM. Factors Affecting TESE Success in Infertility Treatment: Preliminary Results of Single-Center Experience. *Grand J Urol* 2020;1:1-5
<https://doi.org/10.5222/gju.2021.87597>.
- [2] Cooper TG, Noonan E, von Eckardstein S, Auger, J, Baker HWG, Behre HM, et al. World Health Organization reference values for human semen characteristics. *Hum Reprod Update*. 2010;16:231-45.
<https://doi.org/10.1093/humupd/dmp048>.
- [3] Schlegel PN. Testicular sperm extraction: microdissection improves sperm yield with minimal tissue excision. *Hum Reprod* 1999;14:131-5.
<https://doi.org/10.1093/humrep/14.1.131>.
- [4] Corona G, Minhas S, Giwercman A, Bettocchi C, Dinkelman-Smit M, Dohle G, et al. Sperm recovery and ICSI outcomes in men with non-obstructive azoospermia: a systematic review and meta-analysis. *Hum Reprod Update* 2019;25:733-57.
<https://doi.org/10.1093/humupd/dmz028>.
- [5] Yang Q, Huang Y-P, Wang H-X, Hu K, Wang Y-X, Huang Y-R, et al. Follicle-stimulating hormone as a predictor for sperm retrieval rate in patients with nonobstructive azoospermia: a systematic review and meta-analysis. *Asian J Androl* 2015;17:281-4.
<https://doi.org/10.4103/1008-682X.139259>.