Practice Recommendations of Sperm DNA Fragmentation Testing: Expert Commentaries by Invited Authors and Replies by Guest Editors

Contributors from South America

Commentary

Sperm DNA fragmentation testing: when and why?

Sidney Glina

Division of Urology, Faculdade de Medicina do ABC, Santo André, São Paulo, Brazil

Correspondence to: Sidney Glina. Division of Urology, Faculdade de Medicina do ABC, Santo André, São Paulo, Brazil. Email: glinas@terra.com.br.

Comment on: Agarwal A, Majzoub A, Esteves SC, *et al.* Clinical utility of sperm DNA fragmentation testing: practice recommendations based on clinical scenarios. Transl Androl Urol 2016;5:935-50.

Submitted Jan 30, 2017. Accepted for publication Feb 07, 2017.
doi: 10.21037/tau.2017.03.44
View this article at: http://dx.doi.org/10.21037/tau.2017.03.44

Guideline is information intended to advise people on how something should be done or what something should be, according to Cambridge Dictionary (1). In a medical context, "guidelines are a series of suggestions, issued by official bodies or by independent experts, for the conduct of medical practice. They include advice on the treatment of particular disorders or on effective ways of dealing with any clinical or human-relational problem" (2).

Male infertility is a complex area where guidelines or practice recommendations are not an easy task to accomplish. Unlike treating a tumor or a urinary stone where one can have objective outcomes, the result of a certain treatment on male infertility depends on many variables including partner fertility. What is important for the couple is to have a baby at home and not an improvement of any seminal parameter. Moreover, the semen parameter reference values, which represent the main method of assessment of male fertility status, have changed a lot in the last 50 years, either because better studies have been developed (3) or because there has been a decrease of male fertility (4). Besides that we have made very few advances in the understanding of the pathophysiology of male infertility; even for varicocele, probably the most known and studied cause of male infertility, we still are not able to explain why most affected men can conceive without any treatment.

Agarwal *et al.* (5) reported a comprehensive review on the clinical utility of sperm DNA fragmentation testing and tried to establish useful practice recommendations for the clinicians. The available literature evidence indicates that increased sperm DNA fragmentation can impair pregnancy rates and increase pregnancy losses. Agarwal *et al.* (5) based on clinical scenarios proposed recommendations for its use on patients with varicocele, unexplained couple infertility, recurrent pregnancy loss, assisted reproductive treatment failures and lifestyle risk factors modification. Most of the recommendations according to the authors were grade C, but one that was grade B, again because we do not have enough evidence based papers to support these recommendations.

The problem starts with the diagnosis of SDF; there are eight established techniques, but all of them have important disadvantages (5) and there are no comparative studies among them to understand if their results have the same meaning. So, it is difficult to generalize the results of one technique to all others. Secondly, as have been said many times, it is difficult and costly to do prospective randomized control studies on infertility. Couples are not willing to spend their time when they want to have a baby and it is almost impossible to control all the variables to obtain an objective outcome. Thus, most of the evidences are based on small series of cases and most of them retrospective.

In this complex scenario, the recommendations by Agarwal *et al.* are very useful for urologists because they show

a path to follow, but still there are many questions to answer.

Probably because of all these considerations the most recent guideline of the American Urological Association came out with the statement that there is not enough evidence to support the routine use of SDF testing in the evaluation and treatment of the infertile male (6).

Acknowledgements

None.

Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

References

1. Cambridge Dictionary. Available online: http://dictionary.cambridge.org/dictionary/english/guideline
2. Medical Dictionary. Available online: http://medical-dictionary.thefreedictionary.com/guidelines
3. Cooper TG, Noonan E, von Eckardstein S, et al. World Health Organization reference values for human semen characteristics. Hum Reprod Update 2010;16:231-45.
4. Sharpe RM. Sperm counts and fertility in men: a rocky road ahead. Science & Society Series on Sex and Science. EMBO Rep 2012;13:398-403.
5. Agarwal A, Majzoub A, Esteves SC, et al. Clinical utility of sperm DNA fragmentation testing: practice recommendations based on clinical scenarios. Transl Androl Urol 2016;5:935-50.
6. Jarow J, Sigman M, Kolettis PN, et al. The optimal evaluation of the infertile male: best practice statement reviewed and validity confirmed 2011. Available online: https://www.auanet.org/education/guidelines/male-infertility-d.cfm

Cite this article as: Glina S. Sperm DNA fragmentation testing: when and why? Transl Androl Urol 2017;6(Suppl 4):S504-S505. doi: 10.21037/tau.2017.03.44

