

Sperm DNA fragmentation testing is the way forward

It is my pleasure to write the foreword to this focused edition on sperm DNA fragmentation. This topic is one of the most exciting in male fertility diagnosis and treatment today and it has still so much untapped potential. After years of struggling with outdated diagnostic tools we have discovered DNA fragmentation; a sensitive and specific property of sperm. It is disappointing that there has been so much resistance to its inclusion as a routine test given that there are many robust studies showing its usefulness compared to semen analysis. However, this challenging stance appears to be changing in USA with opinions from andrological leaders identifying the need for better tests and supporting, in principle, sperm DNA damage testing. Its intrinsic superiority stems from its usefulness as a real time and functional test of sperm quality. It is also the only sperm parameter that embeds the code of life. Over the past few years researchers have found that sperm quality measures are not confined to fertility but may be predictors of present and future male health and health of offspring too. The articles in this edition are primarily clinically orientated. That is useful for potential end users. I agree that we need to stress that molecular tests such as these are likely to continue to be outsourced for optimal accuracy and quality control and also that all SDF tests are not the same. This is well communicated in the chapter 'The problem of mixing apples and oranges in meta-analytic studies'. Following on from this is the clear need for clinics to understand the differences between a similar result but from different tests. For example, 30% damage from a comet test is quite different from 30% from a SCSA (Sperm Chromatin Structure Assay). The survey designed to understand who is using the test, what tests they are using, hindrances to use and finally for which groups of men the tests are most useful. The articles continue by focusing on who and how to test from experts in North America, South America, Europe, Africa and Asia. The subtopics covered are broad: from rationale for clinical utility to the role of the female in sperm DNA damage repair. Strategies to reduce damage are also investigated in detail. The focused issue on SDF is well worth a read for a sound understanding of the field and also for an up to date and comprehensive reference on the clinic shelf.

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