Novel Concepts in Male Infertility: Clinical and Laboratory Aspects

Sandro C. Esteves, MD, PhD
Director, ANDROFERT
Campinas - BRAZIL

In the modern era, contemporary management of male infertility has undergone groundbreaking changes with the introduction of new concepts, advanced testing, and therapeutic interventions. It is essential that gynecologists and infertility specialists be continuously updated about the new pearls and pitfalls of male infertility management.

Semen analysis is still one of the most commonly ordered tests. In 2010, the WHO released new cutoff reference values for the semen parameters adopting novel methodology, which has incited much debate. Reference values have been lowered in comparison with previous standards, with a direct clinical implication in decision-making strategies. Specialized laboratory sperm-function tests, such as sperm oxidative stress and sperm chromatin integrity assessments, became clinically available, thus offering an opportunity to better understand sperm dysfunctions concealed during routine semen analysis.

As far as clinical male infertility is concerned, the initial counseling of azoospermic men by an andrologically well educated gynecologist may alleviate the misconception and distress surrounding the false belief of sterility, and will clarify the available options of percutaneous and microsurgical sperm-retrieval techniques and assisted conception outcome. Regarding varicocele, which is commonly seen in infertile males, it is now clear that the best treatment option for infertile men with clinical varicocele is the microsurgical vein ligation. Natural conception is significantly improved after varicocelectomy, and recent data suggest that such treatment optimizes reproductive outcome of couples undergoing ICSI or micro-TESE sperm retrieval.

Lastly, new therapeutic interventions, including gonadotropins, oral antioxidant therapy and lifestyle modifications, have gained increasing attention as they aid in alleviating male infertility.
At the end of this presentation, participants should be able to:

1. Update on the WHO reference values for semen parameters, and understand the role of sperm DNA fragmentation testing to decision-making strategies;
2. Learn how to counsel azoospermic men seeking fertility, and the role of gonadotropin therapy in this infertility condition;
3. Understand the benefits of microsurgery to both sperm retrieval and varicocele treatment;
4. Appraise the role of medical and surgical interventions to infertile men undergoing ART.

As a courtesy of Dr. Esteves, the pdf slides of his talk can be accessed at [http://www.slideshare.net/sandroesteves](http://www.slideshare.net/sandroesteves)