Re: Automated Smartphone-Based System for Measuring Sperm Viability, DNA Fragmentation, and Hyaluronic Binding Assay Score

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Abstract available at http://www.ncbi.nlm.nih.gov/pubmed/30865652

Editorial Comment: The smartphone is an amazing device. It is beyond quaint at this point to say that the smartphone is more sophisticated than the computers that put a man on the moon: the more apt comparison is to say that it rivals early to mid supercomputers in power. And that computational power can be put to use in assessing male fertility. Already innovators have created home smartphone based sperm testing systems that rival the most sophisticated of laboratory computer assisted sperm analysis machines. In this article these investigators describe a compact device using a cell phone and reagents for various tests including sperm viability, DNA fragmentation and the hyaluronic acid binding assay. It wouldn’t be ideal for home use, but it potentially places the sophistication of the andrology laboratory in the urology practitioner’s office and heralds a future where the laboratory moves from the hospital to the clinic, closer to the patient and the doctor.

Craig Niederberger, MD

Re: Seminal Plasma of Men with Severe Asthenozoospermia Contain Exosomes That Affect Spermatozoa Motility and Capacitation

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Fertil Steril 2019; 111: 897–908.e2. doi: 10.1016/j.fertnstert.2019.01.030

Abstract available at http://www.ncbi.nlm.nih.gov/pubmed/31029245

Editorial Comment: Exosomes are little balls of chemicals such as nucleic acids, proteins and lipids that are released from cells. The seminal plasma contains exosomes originating from the prostate, epididymis and other glands. As nature mostly does not operate arbitrarily, it is reasonable to ask what exosomes are doing there and whether that information can be used to improve male fertility. These investigators isolated seminal fluid exosomes, determined their content and interestingly demonstrated that exosomes from normozoospermic but not asthenozoospermic men improved sperm motility and the acrosome reaction. This work may offer new ways of assaying male reproductive health beyond the male gamete by looking into its surrounding milieu, and also novel treatments to stimulate sperm.

Craig Niederberger, MD

Re: Features of the Metabolic Syndrome in Late Adolescence are Associated with Impaired Testicular Function at 20 Years of Age

R. J. Hart, D. A. Doherty, T. A. Mori, L. A. Adams, R. C. Huang, N. Minaea, D. J. Handelsman, R. McLachlan, R. J. Norman, J. E. Dickinson, J. K. Olynyk and L. J. Beilin

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