In the present presentation, we discuss both conventional and emerging treatments for endometriosis, with different presentations across the lifespan and discuss how emerging therapies might fit into future medical management of endometriosis. Conventional therapies include nonsteroidal anti–inflammatory drugs, combined oral contraceptives, progestins, GnRH agonists/antagonists, and aromatase inhibitors. Emerging therapies are focused on disease-specific targets such as endothelial growth factor receptors, etc. It seems that the field of medical treatment of endometriosis is now moving toward modifying the immune and inflammatory responses in endometrial implants. If these drugs show efficacy in clinical trials, combining them with current medical treatment is expected to result in a profound impact on symptom and disease burden for patients who suffer from endometriosis worldwide.

K-21
The reproductive microbiome

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In routine ICSI, the selection is based on morphology and viability, which does not necessarily preclude the chance injection of DNA-damaged or apoptotic sperm into the oocyte. Sperm with a high negative surface electrical charge, named "Zeta potential", are mature and more likely to have intact chromatin. In this procedure, sperm is selected based on the presence of a negative charge on sperm membrane. Thus, the aim of our work is the comparison between pure gradient and Zeta method, to select spermatozoa with normal chromatin. Our aim is to develop a simple Zeta potential method for sperm isolation; and to analyze the sperm maturity, morphology, and DNA parameters.

K-23
The use of time-lapse technology for embryo culture, is it necessary?

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K-23
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Setting up efficient criteria and reproducible approach to identify the best embryo is an important challenge in in vitro fertilization laboratory. Also, embryo culture in optimal conditions is a crucial factor for assisted reproductive techniques success. Conventional incubators and morphological microscopy assessment are routinely used to culture and select embryos with the highest developmental potential to transfer. Conventional microscopy analysis requires embryo removal from the stable condition of the incubator. So, it exposes the embryos to temperature, pH and oxygen level changes. However, the morphological analysis may include discrete data of blastomere size, number and symmetry, fragmentation, the appearance of inner-cell mass, and trophectoderm of the blastocyst.

In recent years, new incubators and culture medium have been improved which provide better development of embryos. Time-lapse technology provides continuous culture and observation of embryos. It eliminates the need for embryo removal from the stable condition of the incubator. Also, time-lapse technology allows embryologists to assess the exact developmental events of embryos. The embryologists are allowed to access and register the embryo development events from extrusion of the second polar body to blastocyst formation. Time-lapse technology has spread rapidly and a large number of in-vitro fertilization labs produced considerable data. Although, there is no consensus on which morphokinetics parameters, or combination of them, should have a main role in the selection of an embryo. Several confounding factors including patient characteristics and clinical procedures have been seen to influence the development of embryos.

However, there is not sufficient research of difference in clinical pregnancy, live birth, miscarriage rates between Time-lapse technology and conventional incubation. The application of this technology is quickly growing, becoming increasingly more accurate. Studies contain deep-learning models, artificial intelligence, and embryo morphokinetics are currently increasing. It enhances hopes for time-lapse technology for clinical use in the near future.