Editorial Commentary

A warm welcome to the first issue of the Year 2022! The issue comes with a narrative review and original articles addressing laboratory and clinical aspects of human reproduction.

The review by Sirait et al. addresses the current evidence regarding vitrification of in vitro-matured oocytes in the context of fertility preservation. It provides the current perspectives on vitrification of such oocytes before or after in vitro maturation. An experimental study in adult Wistar rats by Dorsaf et al. raises the possibility of oxidative stress to spermatozoa on exposure to smoke incense of certain plant extracts. An in vitro study by Amirjannaty et al. explores the toxic effects on spermatozoa induced by exposure to cadmium (an occupational exposure) and protective effects of melatonin.

The metabolic disturbances associated with polycystic ovary syndrome (PCOS) and simple tests to identify those who may be harbouring such problems are both clinically relevant. A cross-sectional study by Banu et al. identifies an association between cardiometabolic risks in lean PCOS women and lipid accumulation product. A case–control study by Bhushan et al. concludes that PCOS is associated with higher circulating homocysteine levels compared to a non-PCOS control population, while fasting insulin and homeostatic model assessment of insulin resistance (HOMA-IR) levels may be influenced by body mass index rather than PCOS. While the findings of these studies add to the available evidence, an important issue needing to be addressed is to define their place and value in routine clinical practice through large prospective cohort studies.

A prospective cohort study by Khurana et al. reports an improvement in pregnancy rates with escalating doses of letrozole across all phenotypes of PCOS. The findings of this methodologically sound study have important clinical implications for the management of infertility associated with PCOS. A retrospective cohort study by Cicek et al. comparing different types of gonadotropins for ovarian stimulation in intrauterine insemination cycles reports a similar pregnancy and live birth rate with recombinant follicle-stimulating hormone (FSH), highly purified urinary FSH and highly purified human menopausal gonadotropins. Bayraktar et al., in a retrospective study, address the effect of FSH receptor polymorphism on in vitro fertilisation (IVF) cycle outcomes. The authors conclude that ser/ser polymorphism is associated with poor response without any negative impact on the pregnancy or live birth rate per embryo transfer. While the findings are reassuring, they need further affirmation by well-powered studies. Repalle et al. have addressed an important issue of the effect of sperm DNA fragmentation and assisted reproductive technology (ART) outcome based on female partner’s age. The findings suggest that while high DNA fragmentation is associated with reduced live birth rate and increased miscarriages, such adverse outcomes are limited to those with female partners aged above 30 years.

In a cross-sectional study, Polim et al. have identified a positive correlation between serum oestradiol level on trigger day and endometrial mRNA expression of both kisspeptin and leukaemia inhibiting factor in IVF cycles. However, the limiting factor of the study remains the absence of data on clinical outcomes. Azzahra et al. have identified a positive correlation between microRNA-135b in spent media and chronological age in women undergoing IVF. However, the authors have appropriately recommended that other factors which may influence the expression must be identified before considering it as a non-invasive marker of embryo quality. Ritu et al., evaluating the role of mitochondrial DNA in the trophectodermal cells as a potential marker of embryo quality have reported no association between the levels and blastocyst quality, implantation potential and clinical outcomes.

The article by Naredi et al. studies the alternative option of intrallesional methotrexate to failed conventional medical management of ectopic pregnancy. There are two interesting correspondences related to manuscripts previously published in the Journal.

The fundamental value of any clinical research is the impact it has on our clinical practice. In addition to the points I have alluded to in my previous editorial, it is important to perform statistical analyses appropriate to the type of study and communicate the results effectively, to draw relevant conclusions. Conforming to the checklists available for different study designs does help in improving the quality of the manuscripts and the details are available on the Journal website. I hope that many of you find it interesting to note that non-randomised studies (case–control and cohort) do find their way into meta-analyses and systematic reviews. The Newcastle-Ottawa Scale serves as a useful tool to assess the quality of such studies. I look forward to receiving submissions conforming to relevant checklists.

Best wishes!

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