Anti-Müllerian hormone-tailored stimulation protocols improve outcomes whilst reducing adverse effects and costs of IVF

Sir,

We would like to comment on our recently published article in your journal (Yates et al., 2011). Since the publication of that article, it has emerged that there was a change in the embryological culture media used during the fertilization and preimplantation incubation of oocytes, from Medicult media to the use of Vitrolife media. This change occurred just before the introduction of anti-Müllerian hormone (AMH)-tailored protocols in the unit (1 December 2008).

Alongside this change, there were a number of organizational and protocol changes in the embryology laboratory. Given the pre–post design of the study, it is not possible to differentiate these two coincident contributions and some of the effects noted may not just be related to the AMH protocol but also to the changes in embryology.

It is plausible to speculate that the change in culture media may have contributed to the increase in some of the outcomes seen in the AMH group. There is some evidence in the literature that the use of Vitrolife media can improve the quality of cleavage embryos (Van Langendonckt et al., 2001; Zollner et al., 2004); however, the translation of this into increased fertilization and clinical pregnancy rates is less clear cut. A higher pregnancy rate was observed when oocytes/embryos were incubated in Vitrolife media when compared with those incubated in Cook media (Dumoulin et al., 2010). Conversely, other researchers (Zollner et al., 2004; Sifer et al., 2009) observed enhanced morphology of Day 3 embryos in Vitrolife media compared with Medicult media, but this was not reflected in an increased fertilization rate in either study.

Despite this added caveat, we remain confident that the main outcomes from our study, namely increased safety and cost-effectiveness, are attributable to the introduction of AMH-tailed stimulation regimens. We have clearly shown significant reductions in cost of medications and in the incidence and cost of treating ovarian hyperstimulation syndrome (OHSS). The number of women who reached embryo transfer was higher in the AMH-tailored group compared with conventionally treated women, an observation logically in line with a >50% reduction in cycle cancellation/ freeze all and hospital admissions for OHSS (Table II). These improvements are all attributable to the pre-embryology phase of the assisted reproductive technology process, and as such are not influenced by the change in embryology media.

In conclusion, we apologize for this omission from the original article, but nevertheless we believe that the main end-points of our study, namely improved safety and cost-effectiveness, remain a consequence of the AMH-tailored stimulation protocol.

Conflict of interest

None declared.

References


Allen P, Yates1*, Stephen A. Roberts2 and Luciano G. Nardo3,4

1Department of Clinical Biochemistry, Manchester Royal Infirmary, Manchester, UK
2Health Sciences Methodology, University of Manchester, Manchester, UK
3Reproductive Medicine and Surgery Unit, GyneHealth, Manchester, UK
4University of Manchester, UK

*Correspondence address. E-mail: allen.yates@cmft.nhs.uk
doi:10.1093/humrep/der397

Advanced Access publication on November 23, 2011