WHO reference values for human semen

Sir,
We appreciated the efforts of Cooper et al. (2010) in providing new reference values for semen analysis. Data presented by Cooper et al. include men from an unscreened general population, young healthy men with unproven fertility recruited in trials on hormonal male contraception and men with proven fertility as assessed by a time-to-pregnancy (TTP) ≤ 12 months.

The authors analyze a large bulk of data from published studies and establish the fifth centile calculated from the population with proven fertility (i.e. with a TTP ≤ 12 months) as being an appropriate low reference value for ‘normality’, in line with clinical chemistry standards. The reference values provided by Cooper et al. for men with proven fertility have been adopted tel quel by the fifth WHO edition ‘Laboratory Manual for the Examination and Processing of Human Semen’ (World Health Organization, 2010).

However, Cooper et al. (2010) show significant differences in all semen parameters between the unscreened general population and the group with proven fertility. This observation suggests that unscreened and fertile populations are characterized by their own reference values.

Seminal fluid analysis does not prove fertility by definition. Also, in Reproductive Medicine Units, unscreened patients come to consultation most often, instead of those with proven fertility. Therefore, we suggest that in a Reproductive Medicine Unit setting, it may be more appropriate using the reference values established for an unscreened population (i.e. the population usually under study) instead of those established for patients with proven fertility, who usually do not attend Reproductive Medicine Units.

References


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doi:10.1093/humupd/dmq019
Advanced Access publication on June 11, 2010

Reply: WHO reference values for human semen

Sir,
The comments made in this letter about the new WHO reference values for human semen parameters (Cooper et al., 2010), which have been incorporated into the fifth edition of the WHO Laboratory manual for semen analysis (WHO, 2010), are a welcome part of a wider discussion about the relevance of these values for reproductive medicine. This discussion has been given an airing in a special issue of the Asian Journal of Andrology (Handelsman and Cooper, 2010a,b). In the Foreword, Handelsman and Cooper (2010a) raise the many problems relating to providing reference values for human semen that they asked the contributors to discuss, and in the Afterword, Handelsman and Cooper (2010b) they summarize and comment on the remarks made by the authors contributing to the special issue. It is hoped that further discussion of these values in these pages will make clear the significance of such reference limits and promote a more sensible use of the WHO reference limits than has hitherto been the case.

References


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doi:10.1093/humupd/dmq020
Advanced Access publication on June 11, 2010