Letter to the Editor

Seasonal appearance and seasonal disappearance of menstrual function

Sir,
Garai and co-workers’ observation of seasonality in the occurrence of the first missed menstrual bleeding in perimenopausal women (Garai et al., 2004) indicates that human menstrual function is influenced by seasonally varying environmental factors. As the authors assert, the influence of these seasonal triggers might become stronger from the time that endogenous control of the menstrual cycle starts decaying. In an earlier edition of this journal, we reported evidence pointing to a similar process, though in the reverse direction, at the start of the reproductive span (Smits et al., 1998). In a historical sample of women born at the end of the 19th century, we observed that fecundability (which strongly depends on menstrual function) was higher during late spring and late autumn, and that the strength of the variation depended greatly on age. In women under 20 years of age, fecundability was more than five times as high during these seasons compared with other seasons, while the fecundability of older women (none being older than 39 years) showed a variation of only 40%. Still other authors have described seasonal variation in the timing of menarche, with increased rates during summer and early winter (Brundtland and Liestøl, 1982). Western humans are (virtually) non-seasonal breeders because of, among other things, nutritional abundance, artificial light and artificial heating (Rojanski et al., 1992). At both ends of the female reproductive span, however, the innate propensity of our reproductive system to respond to seasonal cues still shows.

References

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Reply to ‘Seasonal appearance and seasonal disappearance of menstrual function’

Sir,
We appreciate the interest of Professor Smits in our work. Considering their comment, we fully agree that ample examples of seasonal phenomena in human reproduction can be cited from the literature and there might be even more that await description. Concerning the fact that ‘western humans are virtually non-seasonal breeders’, both Smits’ and our data support that seasonality could still be revealed in their reproductive functioning despite the fact that their exposure to environmental cues of the seasons (availability of food, length of night darkness, etc.) has become strongly blunted.

In fact, their finding of a more pronounced seasonal effect on fecundability at the start of the reproductive span (Smits et al., 1998) might stem from similar mechanisms to the seasonal effect on cessation of fecundity at the other end. It could be asserted that stable cycles—throughout most of the reproductive span—are more resistant to the influence of environmental cues than the more labile cycles, which are known to occur at both ends of the fertile period. Nevertheless, further studies are needed to test this notion.

It would also be of interest to study populations exposed to seasonal changes other than the classical four season cycles of the temperate climate. Data from the monsoon region are scarcely studied in this respect (Yadava et al., 1979; Ellison, 1994).

References

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Pain relief using electro-acupuncture for oocyte retrieval

Sir,
In their paper on the analgesic effects of electro-acupuncture (EA) during oocyte retrieval, Humaidan and Stener-Victorin