Letters 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...
drew a number of positive conclusions on this method, which is now the analgesia of choice in 50% of the patients in the Fertility Clinic in Skive, Denmark. I think that their conclusions can be modified considerably and will argue that conventional methods of pain relief during oocyte retrieval are still preferable. Regarding the adequacy of the EA analgesia, we learned that although the authors apparently have been able to convince their patients of the reliability and efficacy of EA, in the EA group the experienced pain was more severe than in the group receiving conventional analgesia (and 9% needed supplementation with an opiate). Of course many patients being confronted with enthusiastic and dedicated nurses and physicians, strongly convinced that EA produces adequate analgesia, will be prepared to tell them that the pain was bearable. This does not mean that they would not have preferred the conventional medical analgesia, had they been able to compare or choose. The main ‘advantages’ that should compensate for the less effective analgesia of EA are ‘a shorter hospitalization time and lower costs’. These advantages are, however, of the type ‘statistically significant, but clinically irrelevant’: per patient, the EA was 1.34 Euro cheaper and the EA patients left the clinic some 8 min earlier. That was all.

I will refrain from commenting on the difference in acupuncture points presently en vogue in Denmark and Sweden, but the fact that both practices were ‘successful’ does strengthen my conviction that EA has nothing to do with atavistic absurdities such as meridians and acupuncture points. Its effects can be adequately explained by the resulting distraction of attention and by the weakly analgesic effect of ‘counter-irritation’.

References


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Reply to ‘Pain relief using electro-acupuncture for oocyte retrieval’

Sir,

We thank you for the opportunity to comment on Dr Renckens’s letter and we are pleased that our paper sparked some debate.

Few topics in pain management are as controversial as acupuncture; the evidence seems to be split down the middle between positive and negative results. Proponents and opponents of acupuncture often do not seem to speak the same language and appear to keep missing each others’ points. Interpretation of results is often difficult in acupuncture trials. In essence, proponents usually find fatal flaws in negative randomized controlled trials (RCTs) while opponents find the same in positive RCTs, thus opponents are likely to search for a conclusion other than ‘acupuncture works’. In the medical community at large, there is a general acceptance that acupuncture may alleviate pain and that it may serve as an alternative or complement to pharmacological interventions (World Health Organization, 2003).

When dealing with acupuncture and research, it is obvious that already when the patient has accepted the study criteria, she is part of a selected group, as she is willing to accept acupuncture for pain relief. However, these are the conditions for all randomized trials, as Dr Renckens is aware. Of course one could never disregard a possible influence of nurses and physicians, even if care is taken to treat study groups equally, as was the case in the present study (Humaidan and Stener-Victorin, 2004). However, again this issue is not peculiar to an RCT on acupuncture. The motivation and ability of the patient to cope with pain during oocyte retrieval, and also the support from the medical team, is an important component of pain relief, regardless of the method used. Interestingly, recent functional neuroimaging studies indicate that expectations, both certain and uncertain, play an important role in modulation of both acute and chronic pain, and that expectation is mediated by neural pathways (Ploghaus et al., 2003). Furthermore, it is a well known fact that the effect of all types of pain relief may be lost if the patient feels emotionally unsafe and uncomfortable with the method used.

Dr Renckens argues that conventional methods of pain relief during oocyte retrieval are still to be preferred. This of course presumably is based on his own experience, limited to conventional methods only.

First of all, Dr Renckens has missed our recent study showing that electro-acupuncture (EA) as analgesia during oocyte retrieval induces as good analgesia as alfentanil (Stener-Victorin et al., 2003). Thus, EA—when used in combination with a paracervical block (PCB)—has in two previous trials been found to be as effective as alfentanil in inducing adequate analgesia during oocyte retrieval (Stener-Victorin et al., 1999, 2003). In the study by Humaidan and Stener-Victorin under discussion, the EA group had a significantly higher pain scoring during oocyte retrieval compared with the conventional medical analgesia (CMA) group. On the basis of the previous studies, we suggested that the difference in pain ratings most probably relied on the fact that the CMA group, unlike the EA group, was pre-medicated, since the level of pain in the EA group of Humaidan and Stener-Victorin was comparable with the levels of the EA groups in the two previous studies (Stener-Victorin et al., 1999, 2003; Humaidan and Stener-Victorin, 2004).

Interestingly enough, 1–2 h after oocyte retrieval, when all three studies were grouped and analysed together using the meta-view program in Review Manager 4.1 (The Cochrane Collaboration), the post-operative abdominal pain was significantly lower in the EA groups as compared with the alfentanil and CMA groups independently of pre-medication.