Correspondence

Reversible inhibition of central precocious puberty with a long acting GnRH analogue

Sir,

We were interested to read the recent paper by Ward *et al*¹ about the effect of the GnRH analogue (6-D-Ser) GnRH(Buserelin) on gonadotrophin pulsatility. This report raises the question of analysis of pulsatile hormone secretion, which has only recently come to the fore in paediatric practice. Because studies of this type will be increasingly performed, we wish to draw attention to what can and, perhaps more importantly, what cannot be learned from different methods of sampling.

It is apparent that the biological effect of both gonadotrophins² and growth hormone³ are related to the pulsatile pattern of their secretion and not to mean blood concentrations. There is no consensus on the optimum method to identify gonadotrophin pulses in serum,⁴ although the method most commonly used is to withdraw blood during a 5-10 second period and repeat this procedure at intervals. The sampling interval needs to be chosen to reflect the approximate frequency of the natural hormone pulsatility and the biological half life of the hormone. For both gonadotrophins and growth hormone, the maximum time interval should not be greater than 15-20 minutes. The more frequent the sampling interval, the more pulses are detected.⁴ The method that Ward *et al* used was to withdraw blood continuously over 15 minutes and to measure the gonadotrophin concentration in the pooled sample. This method is not capable of revealing the frequency and amplitude of gonadotrophin pulses in serum unless very short (5 minutes or less) sampling intervals are employed.

Further ambiguity has been caused in Ward's study by the use of sampling periods that varied between four and three quarters and five and three quarters hours. These are short compared with the known frequency of gonadotrophin pulses in puberty, which occur approximately every two hours.⁵ A more appropriate sampling period would be longer than eight hours.

The data presented by Ward *et al* provide information about mean serum gonadotrophin concentrations at night, but it is pulsatile gonadotrophin secretion that is the stimulus for gonadal maturation. As the authors have not assessed gonadotrophin pulsatility, their claims about reversibility of the effect of (6-D-Ser)GnRH could be premature.

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Rectal examination and acute appendicitis

Sir,

The short report on 'Rectal examination and acute appendicitis'¹ records the findings of two paediatric surgeons but fails to make a useful contribution for other clinicians managing children with acute abdominal pain. I am concerned that paediatricians, who are often reticent about performing rectal examinations, will quote this study as a reason for omitting this part of the clinical examination. The management of acute abdominal pain in children is not straightforward and 'the man on the spot' needs unequivocal guidelines rather than the contemplation of the fact that his colleagues can diagnose acute appendicitis in over 90% of cases without rectal examination. This report, which works back from the histology of the removed appendix to the clinical findings, is of no help to the surgeon at the bedside.

The third conclusion that 'the rectal examination is sometimes useful when the diagnosis is uncertain' is too vague for the trainee duty surgeon. The correct emphasis appears in the middle of the discussion where the rectal examination is described as 'essential in those with acute abdominal symptoms, but with inconclusive or no abdominal signs'. This imperative should be given more prominence in the presentation and not omitted from the summary and conclusions.

A careful history and a thorough examination of the patient are essential,² and the teaching of Hamilton Bailey is ignored at our patients' peril. Perhaps your journal will publish a paper which makes a positive contribution to the management of the child with acute abdominal pain and thus encourages safe clinical standards for 100% of our patients rather than 90%.

References

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