In their paper Shalet et al documented severe Leydig cell damage after testicular irradiation. This was irrespective of whether subjects were studied within one year or between three and five years from the time of radiotherapy, suggesting that recovery of function is unlikely. Our findings were similar to this in the majority of boys studied. In two of the seven cases studied sequentially using the human chorionic gonadotrophin test, however, at least partial recovery was clearly shown. The two subjects mentioned were studied two and three years after irradiation, when they were aged 10-9 years (Tanner Stage I) and 10-6 years (Tanner Stage II), respectively. The first boy had a basal testosterone concentration of 1-1 nmol/l (0.31 ng/ml) rising to 4-6 nmol/l after a three day human chorionic gonadotrophin test, while the second had a basal concentration of 0-8 nmol/l (0-23 ng/ml) rising to 6-8 nmol/l. The testosterone responses after human chorionic gonadotrophin stimulation in these two children only six months after irradiation were grossly inadequate. Plasma testosterone rose from a basal concentration of 0-5 nmol/l (0-14 ng/ml) to a peak of 1-7 nmol/l (0-49 ng/ml) in the first boy and from 0-4 to 1-2 nmol/l (0-12 to 0-35 ng/ml) in the second. We acknowledge that there is a possibility that these children may need hormone supplementation in adult life for the reasons stated by Shalet and Morris-Jones in their letter, and vigilant follow up is mandatory.

With our present data on small numbers of subjects it is difficult to be sure that the degree of testicular damage sustained is age related rather than related to pubertal state at the time of radiotherapy. All our subjects were, however, prepubertal at the time of radiation. We are currently attempting to clarify this with further prospective studies.

References


Prophylaxis of febrile convulsions: searching for the best

Sir,

As confirmed by Knudsen in Archives1 and elsewhere,2 the short term prophylaxis with diazepam seems sufficiently effective, feasible, and advantageous. His considerable effort1 in codifying the risk of recurrence (age being the most predictive factor, on the basis of natural history, for the longer time span in which the central nervous system is evolving) must be considered as another step toward personalising the prophylaxis. The temperature of 38-5°C, however, can be a near uncontrollable level of fever, adding an unnecessary extra

Drs Leiper, Grant, and Chessells comment:

We welcome the comments of Shalet and Morris-Jones in response to our paper.1 We agree that it is important to know if Leydig cell vulnerability to radiation is age related and if such damage is reversible with time.

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