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Commentary

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A DIAGNOSIS of Malignant Germ Cell Tumour (MGCT) is one that most paediatric oncologists now receive with a sense of relief at their weekly 'Grand Round', because MGCTs have joined the ranks of the other 'usually curable' childhood solid tumours—Wilms' tumour, Hodgkin's disease, non-Hodgkin's lymphoma, retinoblastoma and hepatoblastoma. This improvement derives from the successful transfer of the 'adult' experience, using cisplatin- or carboplatin-containing regimens in testicular cancer, into paediatric practice. In the early to mid-nineteen eighties, there was considerable resistance to cisplatin-containing therapy because the drug was regarded as 'too toxic' for small children. VAC or VAC-doxorubicin, supplemented by radiation therapy and surgery, were regarded as the 'standard treatment'. Now, however, it is generally agreed that both cisplatin and carboplatin are relatively well tolerated by

children, even infants. Concern that young children's developing speech may be impaired because of high-tone hearing loss is tempered by the availability of regular monitoring by experienced audiologists now attached to most paediatric oncology centres. Clinically significant hearing loss can be successfully treated by specialised hearing aids [1] though naturally, avoidance would be better (a) by confirming that carboplatin, which is less ototoxic than cisplatin, is as effective against MGCT or (b) by giving cisplatin by prolonged continuous infusion rather than by bolus infusion. There is already evidence to suggest that both nephrotoxicity and ototoxicity are reduced by using this schedule.

A few specific points might be emphasised in relation to specific primary sites of MGCT in children. Sacrococcygeal tumours are much more common in girls than in boys. Why? This observation seems to have been passed on from textbook to textbook without any sign of 'curiosity' on the part of the successive authors—yet there must be a molecular explanation which might throw some light upon the biology of teratomagenesis. Another textbook assertion is that the prognosis of sacrococcygeal tumours is poor compared to those of other sites, but this author suspects that the reason is more probably that surgeons and oncologists and—dare I say it?—some paediatric oncologists are still unwilling to use the platinum-containing regimens sufficiently intensively in their patients. Certainly, the prognosis is encouraging (around 80% long-term survival) in one consecutive series of patients, from our institution, treated with these regimes [2]. The pure yolk sac testis tumour of infant boys—'orchioblastoma'—is curable by radical orchiectomy alone in 70–80% of patients, when there is no evidence of metastatic disease. Presumably parents and doctors note the size inequality of the testes, leading to early diagnosis—possibly the only example of succesful screening, albeit by 'proxy' and usually by accident, in paediatric cancer! One point of difference from Professor Pinkerton is that this author knows of no evidence that 'orchioblastoma' is commoner in children with undescended testes. The peak age of this particular tumour is 1–2 years, a fact which argues against an 'environmental influence'. Paediatric surgeons generally recommend orchidopexy no earlier than 18 months of age because so many 'undescended' testes are actually still *en route* to the scrotum but have not arrived by that age. Although orchidopexy is certainly still advocated in the hope that the incidence of 'adult' testicular MGCT will be reduced, there is still, as yet, no incontravertable proof that this is the case. It may be that the undescended testes are abnormal and, in any case, predisposed to tumorigenesis. Alpha feto protein (AFP), the fetal molecular equivalent of albumen is, as Professor Pinkerton indicates, present at extremely high levels at terms (and even higher levels in preterm babies). AFP levels fall steeply and physiologically to the 5–100 μg/l range at 6 months, and more slowly to normal 'adult' levels at around 1 year. This normal physiological range *must* be taken into account when interpreting the significance of 'raised' levels in this age group [3].

Professor Pinkerton's excellent and comprehensive Update (pages 895–901) raises many interesting scientific and clinical issues but his main emphasis, because therapy of MGCT is so successful these days, is that 'cure at least cost' should be the guiding maxim. A crucial element of that approach is his advocacy for agreed definitions of 'risk factors' to distinguish patients who might be cured with less therapy—no bleomycin, for instance—from those who need more intensive treatments. An international collaborative effort by paediatric oncologists is therefore now needed to define these risk groups. Paediatric oncologists should not lose sight of the fact that MGCT in children and adults, despite some differences of emphasis—more extragonadal primary tumours in children, for instance—are in fact the 'same disease'. This is one of several areas in cancer medicine where continuing collaboration between adult and paediatric oncologists is likely to benefit patients of all ages.

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