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Elevation of Serum Human Chorionic Gonadotrophin as the Only Indication for Isolated Cerebral Relapse of a Germ Cell Tumour of the Testis

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HIGH-DOSE CHEMOTHERAPY with peripheral stem cell or autologous bone marrow support has become more commonly used in patients with refractory or relapsed testicular cancer [1]. However, before starting such intensive treatment, it is important to be sure that no other curable option is available. Germ cell tumours can easily be detected by measurement of serum tumour markers α -fetoprotein (AFP) and human chorionic gonadotrophin (hCG). A persistent elevation or rise in these tumour markers is very suggestive of the presence of a tumour, even when no tumour can be found radiographically.

We report a case of a 28-year-old male with a misleading rise in serum hCG. Two years earlier, this patient presented with retroperitoneal lymph node metastases and a rise in serum AFP and hCG from a germ cell tumour. He underwent orchidectomy and received consecutive chemotherapy (bleomycin, etoposide and cisplatin). After an initial complete response, a rise in serum hCG was observed 3 months later. Histological examination of a retroperitoneal mass revealed chorioncarcinoma. Second-line chemotherapy consisted of vincristine, high-dose methotrexate and cisplatin. Despite normalisation of the tumour marker, repeat laparotomy showed vital tumour, which was completely resected.

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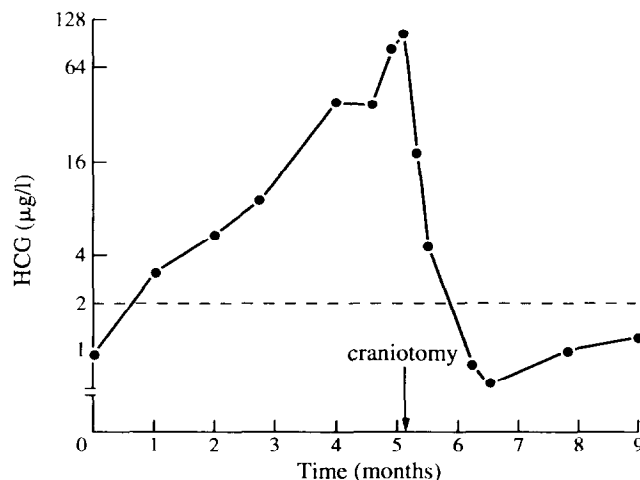


Figure 1. Serum human chorionic gonadotrophin level of the patient (below ----- indicates normal level).

Three months later, the serum hCG rose again. Lung metastases were observed and third-line chemotherapy with etoposide, ifosfamide and cisplatin was initiated. Again, a complete remission was induced but, in the follow-up, a rise in serum hCG was found. This time, no localisation of metastases could be detected and preparations for high-dose chemotherapy with autologous bone marrow and stem cell rescue were made. In the final stage of preparation, the patient suddenly complained of severe headache. A lumbar puncture was performed. The hCG in the CSF was nine times the value of the serum hCG, 700 and 81 µg/l, respectively, making the diagnosis of brain metastasis very likely [2]. Computed tomography confirmed this diagnosis. The patient underwent craniotomy with complete resection of the metastasis, followed by radiotherapy. As is shown in Figure 1, after craniotomy the serum hCG completely normalised. Six months later, the serum hCG rose again, based on lung metastases alone, for which he was treated with high-dose chemotherapy, consisting of carboplatin and etoposide, with autologous bone marrow and stem cell support. Despite a complete biochemical remission, three months later he relapsed again with pulmonary and cerebral metastases and died.

Isolated central nervous system relapse of non-seminomatous germ cell tumour is very rare [3, 4]. However, before starting intensive chemotherapy for a rise in tumour marker alone, the possibility of this localisation should be considered. Although this patient finally expired, with appropriate therapy even long-term remissions of cerebral relapses have been described [3, 4].

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