

LATE RELAPSE OF TESTICULAR CANCER 21 YEARS AFTER FIRST COMPLETE REMISSION : A CASE REPORT

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We report here a case of very late relapse of a nonseminomatous germ cell tumor 21 years after first complete remission. A 42-year-old man, with a clinical history of right testicular cancer, was referred to our hospital with elevated serum alpha-fetoprotein (AFP) level. CT scan demonstrated a 5×5 cm retroperitoneal lymph node swelling compressing the inferior vena cava (IVC) extending from the right renal vein down to the bifurcation of the aorta. The patient received a total of four courses of combination chemotherapy consisting of cisplatin, etoposide, paclitaxel, and ifosfamide. However, the retroperitoneal lymph node metastasis did not respond to chemotherapy, and the serum AFP level increased. Extended bilateral retroperitoneal lymph node dissection with right nephrectomy, partial duodenectomy, and vena cavectomy were performed. The patient has been followed up with no evidence of disease for 48 months after the operation without any further therapy.

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Key words : Germ cell tumor, Late relapse

INTRODUCTION

Late relapse of testicular nonseminomatous germ cell tumors is relatively rare with a frequency of about 3%. We report here a case of very late relapse of a nonseminomatous germ cell tumor 21 years after first complete remission.

In this case, the sudden increase in tumor marker levels was suspected to be associated with rapid tumor progression and multiple metastases.

After chemotherapy chosen as a first therapy was ineffective, complete removal by surgery proved successful.

CASE REPORT

A 42-year-old man, with a clinical history of right testicular cancer, was referred to our hospital with elevated serum alpha-fetoprotein (AFP) level. The patient's medical record showed that he presented with right scrotal swelling with elevated AFP at the age of 22 years old in 1980. Right radical orchiectomy and retroperitoneal lymph node dissection were performed simultaneously. Pathological analysis demonstrated a nonseminomatous germ cell tumor consisting of embryonal carcinoma and teratoma, and a diagnosis of testicular tumor stage II was made. The patient received one course of adjuvant chemotherapy consisting of cisplatin, vinblastine, and bleomycin. After these

treatments, he was examined regularly about every 1 year, AFP level was normalized, and remained less than 5 ng/ml (<15 ng/ml).

In 2000, twenty-one years after the patient achieved complete remission, follow-up examination revealed an elevated AFP level of 625 ng/ml; AFP level was less than 5 ng/ml in 1998. Computed tomographic (CT) scan demonstrated a 5×5 cm retroperitoneal lymph node swelling compressing the inferior vena cava (IVC) extending from the right renal vein down to the bifurcation of the aorta. Imaging analysis failed to detect any other metastatic lesions, but the sudden increase in tumor marker levels was expected to be associated with rapid tumor progression and multiple metastases.

He received only one course of adjuvant chemotherapy consisting of cisplatin, vinblastine, and bleomycin 21 years ago, so combination chemotherapy consisting of cisplatin, etoposide, paclitaxel, and ifosfamide was given.

However, the retroperitoneal lymph node metastasis did not respond to chemotherapy, and the serum AFP level increased to 4,814 ng/ml, prompting us to adopt a surgical therapeutic strategy. CT scan suggested that the tumor had invaded into the right ureter, IVC, and possibly also into the duodenum. Extended bilateral retroperitoneal lymph node dissection with right nephrectomy, partial duodenectomy, and vena cavectomy were performed (Fig. 1). The inferior vena cava was replaced with a Y-shaped Gore-Tex® graft (Fig. 2). A pathological diagnosis of embryonal carcinoma with a small fraction of teratomatous elements was made. Tumor invasion into the IVC and duodenum was observed. The resected tumor had a

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Fig. 1. Intraoperative photograph showing that the tumor had invaded into the inferior vena cava (IVC) and duodenum.



Fig. 2. Retroperitoneal lymph node dissection with right nephrectomy, partial duodenectomy, and vena cavectomy were performed. The inferior vena cava (IVC) was replaced with a Gore-Tex® graft.

thickened capsule (Fig. 3).

After the operation, AFP level was normalized to less than 5 ng/ml. The patient has been followed up with no evidence of disease for 48 months after the operation without any further therapy. He is examined AFP about every 3 months and CT scan every 6 months.

DISCUSSION

Late relapse of germ cell tumors (GCTs) is defined as recurrence after a disease-free period of 2 or more years. The frequency of late GCT relapse has been reported to be around 3%, and half of all cases include teratomatous



Fig. 3. The resected tumor had a thickened capsule.

elements¹⁾.

In a series reported by a group from Indiana University in the USA, patients with late relapse usually showed unfavorable prognosis except those with recurrence of mature teratoma. Many germ cell tumors that show late relapse are believed to have reduced sensitivity to chemotherapy, and surgical treatment may achieve better therapeutic effects²⁾. However, if multiple metastases are found, the probability of achieving a complete cure is extremely low³⁾. In the case described here, we planned chemotherapy as the initial treatment modality in a multidisciplinary approach for two reasons: a) the patient's rapidly elevating and high level of serum AFP suggested the existence of micro-metastases that could not be detected by image analysis; and b) only one course of chemotherapy had been performed 21 years previously and the recurrent tumor did not seem to be refractory to chemotherapy. However, chemotherapy was ineffective in this case. No new metastatic lesions appeared despite rapid AFP elevation up to a level above 4,800 ng/ml during chemotherapy, and we performed surgical resection after chemotherapy had failed.

The multiple courses of chemotherapy performed previously may have been responsible for the chemoresistant characteristics of the relapsed tumor. The resected tumor had a thickened capsule, which may have inhibited the transfer of chemotherapeutic agents into cancer cells and explain why this tumor was refractory to chemotherapy, even though only a single course was administered. No recurrence has been observed over a follow-up period of 48 months without any further therapy.

We reported here a case of late relapse of GCT 21 years after initial treatment. This is one of the longest periods for late relapse of GCT reported to date. In our case, chemotherapy was ineffective and surgical removal provided a cure. Therefore, surgical therapy should always be included for the treatment of solitary late relapse of GCT. The presence of teratomatous elements in testicular tumors is a significant predictor of late

relapse.

REFERENCES

- 1) Michael H, Lucia J, Foster RS, et al. : The pathology of late recurrence of testicular germ cell tumors. Am J Surg Pathol **24** : 257-273, 2000
- 2) Baniel J, Foster RS, Gonin R, et al. : Late relapse of testicular cancer. J Clin Oncol **13** : 1170-1176, 1995
- 3) Nichols CR : Treatment of recurrent germ cell tumors. Semin Surg Oncol **17** : 268-274, 1999

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和文抄録

初回治療寛解の21年後に再発した精巣腫瘍の1例

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症例は42歳，男性．AFP 値が高いことを指摘されて当院を紹介受診した．この患者は21年前に非セミノーマの右精巣腫瘍の治療歴があった．当院受診時のCT では右腎静脈から大動脈分岐まで下大静脈を圧排するような形で 5×5 cm の腫瘍を認めた．当院入院後，シスプラチン・エトポシド・パクリタキセル・イフォスファミドの4剤を併用した化学療法を施行し

た．しかし，腫瘍は縮小せず AFP 値も上昇した．そのためリンパ節郭清術・右腎摘出術・十二指腸部分切除術・下大静脈切除術を施行した．術後 AFP 値は正常範囲内に低下して，現在約48カ月経過しているが再発は認めていない．

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