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Case Report

A Case of Disseminated Testicular Seminoma Successfuly Treated with Combination Chemotherapy and Cytoreductive Surgery

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Abstract: A 34-year-old man was admitted to the hospital with a complaint of a right testicular mass of 2 years duration. Pathological examination after high inguinal orchiectomy revealed anaplastic seminoma of the right testis. Further examination revealed retroperitoneal bulky tumor and pulmonary metastases. He was treated with combination chemotherapy consisting of cisplatin, vinblastine and pepleomycin. He achieved complete response with debulking of remnant abdominal mass after completion of chemotherapeutic courses. Follow-up at 7 months after surgery showed no evidence of local recurrence or metastasis.

Key words: disseminated seminoma, chemotherapy, surgical removal, complete response

Introduction

Pure seminoma is the most common testicular tumor and a highly curable disease when the tumor is localized. However, prognosis of patients with disseminated seminoma is still poor[6]. There are increasing reports[2,3,7] that similar chemotherapy regimens for patients with nonseminomatous testicular tomors produced excellent results in the patients with advanced seminoma. We experienced one case of disseminated seminoma and succeeded in obtaining complete response (CR) with combination chemotherapy followed by surgical removal of the remnant tumor.

Case Report

A 34-year-old man was referred to our hospital in September 1985 for further evaluation and treatment of a 2-year history of right testicular mass. The patients also noticed a 4-kg weight loss and increasing malaise and fatigue. On physical examination, a large and firm right testicular mass (25 × 18 cm) was present, while the left scrotal contents were normal palpation. Abdominal examination revealed a firm, nonmobile and nontender mass (14 × 18 cm) in the umbilical region. Other pathological superficial lymph nodes were not palpable and gynecomastia was not observed. Laboratory examination disclosed markedly elevated serum LDH level and accelerated ESR. Tumor markers were negative except for β-HCG. Right inguinal orchiectomy was performed on the following day of the hospitalization. A hard testicular mass, weighing 1,148 g, was removed. The spermatic cord was free of involvement. Histologically, the tumor was diagnosed as anaplastic seminoma of the testis. The chest X-ray tomography

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Table 1

	Tumor	Markers
CEA	1.29	ng/m*l*
α-FP	9.32	ng/m*l*
β-HCG	4.3	ng/m*l*
LDH	13740	IU/*l*

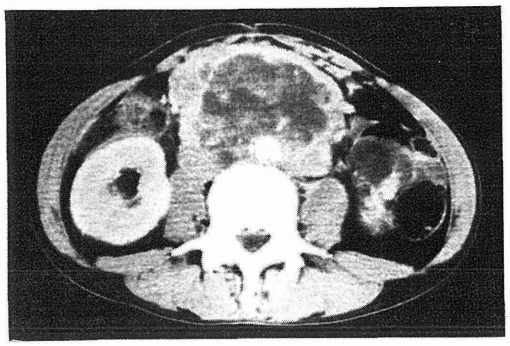

Fig. 1. Abdominal CT before chemotherapy.

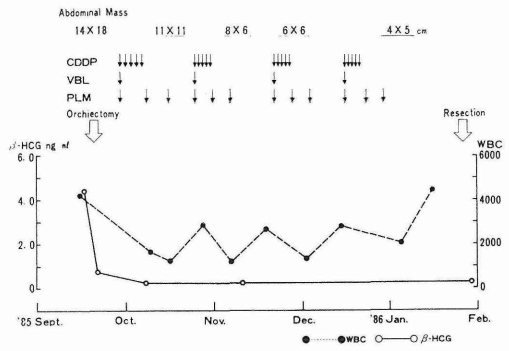

Fig. 2. Clinical course.

indicated three small lesions in the left middle lung field, suggesting pulmonary metastases. Abdominal CT scanning revealed a huge retroperitoneal mass extended from the renal hilus to the right external iliac nodes. At the level of the lower pole of the kidneys, the tumor surrounded the aorta and the inferior vena cava was obscure (Fig. 1). Intravenous pyelography showed right hydronephrosis and left ureter displaced laterally. Neither bone nor liver scanning indicated metastases.

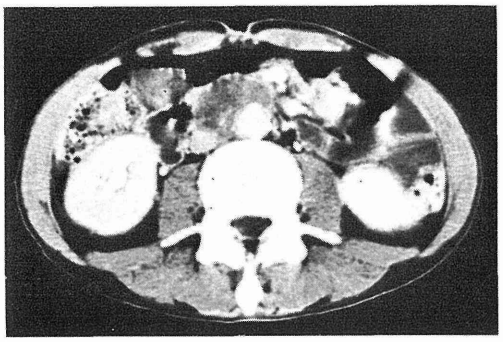

Fig. 3. Abdominal CT after chemotherapy.

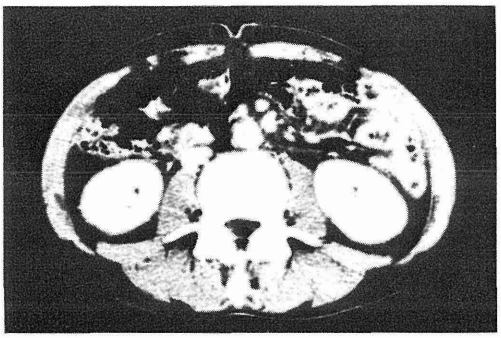

Fig. 4. Abdominal CT after cytoreductive surgery.

The patient was diagnosed as having stage IIIB1 anaplastic seminoma of the testis according to the general rule for clinical and pathological studies on testicular tumors by Japanese Urological Association[4]. The patient subsequently received 4 triweekly courses of combination chemotherapy, consisting of 20 mg/m^2 cis-diamminedichloroplatinumn (CDDP) daily for 5 days, 0.3 mg/kg vinblastine (VBL) every 3 weeks and 20 mg pepleomycin (PLM) once a week. The clinical course of the patient is shown in Fig. 2. Nausea, vomiting, alopecia and myelosuppression, especially leukopenia, were noted as the side effects during the course of chemotherapy. Nadir white blood cell count was 600/mm^3, but the patient well tolerated this series of chemotherapy. Although the

tumor rapidly shrank after the start of the chemotherapy, there remained a firm mass (4×5 cm) in the middle of the abdomen after completion of the chemotherapy. On abdominal CT scan, the remainning tumor was cystic and lobulated (Fig. 3). No lesions were observed on chest X-ray tomography. The patient underwent retroperitoneal lymphadenectomy concomitant with resection of the residual in January 1986. The firm abdominal mass was tightly fixed to both the aorta and the inferior vena cava. Since the plane between the adventitia of the aorta and the tumor was obscure, dissection was difficult and dangerous. The inferior mesenteric artery was surrounded by the mass and completely obstructed. Right iliac lymph node appeared to be atrophic and did not form the mass lesion. All fibro-areolar tissue were removed from the lateral, anterior posterior and medical aspects of the major vessels. Pathological examination revealed only fibrous and necrotic tissue with no viable tumor in the resected abdominal mas and no tumor cells were found in any of the surgical specimens. Abdominal CT after the last operation (Fig. 4) demonstrated no residual masses around the great vessels and that the inferior vena cava previously compressed was restored. At follow-up 7 months postoperatively the patient was well without any local recurrence or metastasis.

Discussion

Anaplastic seminoma is one of the variants of the seminoma and diagnosed pathohistologically when more than three mitoses per high power field are observed without trophoblastic elements. This report described a patient with advanced anaplastic seminoma of the testis, which was successfully treated with combination chemotherapy and subsequent debulking of the remnant of the metastatic tumor.

It is well known that seminomas are extremely sensitive to radiation therapy, so that radical inguinal orchiectomy followed by radiation therapy is the accepted treatment of the choice in early stages[1,6]. In contrast to the excellent prognosis obtained in the patients with early stage seminoma, patients with advanced metastatic disease including those with bulky retroperitoneal disease respond poorly to standard radiation thearapy[6]. The survival rate of the advanced stage patient is extremely poor, about 35%, when treated with radiation alone[7]. Smith and associates reported that the patients with the advanced disease had a cure rate of 22.1%[6] and Huben *et al.* 33% (4 of 12 patients)[3]. Both reports raised the subsequent appearance of extra-lymphatic metastases as a cause of treatment failures. Therefore, other special treatment planning is required for such patients. We preferred the combination chemotherapy as the first-line treatment followed by cytoreductive surgery for our patient mainly for two reasons. First, since the patient already had microscopic metastatic focuses that were impossible to detect with present examination procedure, these focuses may cause poor prognosis later. Advanced seminomas are better treated systemically. Second, from the several recent studies, evidence has accumulated to support the idea that combination chemotherapy for the patients with nonseminomatous tumors also has significant efficacy in those with seminomatous tumors. Einhorn and Williams reported that 12 of 19 patients (63%) with disseminated seminoma achieved CR and the other 7 patients had partial response (PR)[2]. They were treated with combina-

tion chemotherapy of cisplatin, vinblastine and bleomycin. Wajsman and associates have also reported that the first 4 of 6 consecutive patients with bulky abdominal or metastatic disease achieved CR without significant myelosuppression by employing vincristine instead of vinblastine[7]. Leukopenia was observed in our case when myelosuppressive drugs such as vinblastine were used. Serious toxicity was prevented and the patient well tolerated the treatment by monitoring white blood cell count repeatedly and postponing further chemotherapy course until white blood cell count raised up to 2500/mm^3. Pepleomycin substituted for bleomycin in our regimen, because the toxic effect of pepleomycin on the lung is apparently less than bleomycin, although both drugs were proved to be effective on the tumor to a similar extent.

The present case suggests that combination chemotherapy followed by retroperitoneal lymphadenectomy with cytoreductive surgery should be considered as one of the effective strategies producing excellent clinical results for the patients with disseminated seminoma and that the patient tolerate this chemotherapy regimen without any serious morbidity if carefull attention is given to its adverse side effects. It is our present feeling that the patient with disseminated seminoma disease should be principally treated with chemotherapy as the first-line treatment and surgical removal of remnant tumor is indicated when CR is not obtained only chemotherapy.

References

1) Dosoretz, D. E., Shipley, W. U., Blitzer, P. H., Prat, J., Partkhurst, E. and Wang, A. C.: Megavoltage irradiation for pure testicular seminoma. Cancer, **48**, 2184–2190, 1981.
2) Einhorn, L. H. and Williams, S. D.: Chemotherapy of disseminated seminoma. Cancer Clin. Trials, **3**, 307–313, 1980.
3) Huben, R. P., Williams, S. D., Pontes, J. E., Panahon, A. M. and Murphy, G. P.: Seminoma at Rosewell Park 1970 to 1979. Cancer, **53**, 1451–1455, 1984.
4) Japanese Urological Association and The Japanese Pathological Society: General rule for clinical and pathological studies on testicular tumors. The 1st Edition. Kanahara Shuppan Co, Tokyo, 1984.
5) Smith, R. B.: Management of advanced testicular seminoma. J. Urol., **121**, 429–431, 1979.
6) Smith, R. B.: Management of testicular seminoma. In; Geitourinary Cancer, 460–469, Ed. D.G. Skinner and J.B. deKernion, Saunders Co, Philadelphia, 1978.
7) Wajsman, Z., Beckley, S. A. and Pontes, J. E.: Changing concepts in the treatment of advanced seminomatous tumors. J. Urol., **129**, 303–306, 1983.

化学療法及び外科的切除により完全寛解を得た進行性睾丸精上皮腫の1例

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抄　録：症例は34歳の男性で，右側陰嚢内腫瘤を主訴として来院した。初診時，腹部正中に小児頭大の固い腫瘤を認めた。高位除睾術を施行し，陰嚢内腫瘤は病理組織学的に退形成性睾丸精上皮腫と診断された。又，胸部断層写真で，肺転移が認められた。cisplatin, vinblastine, pepleomycin の化学療法後腹部の腫瘤は著に明縮小し，肺転移も消失した。残存腫瘤を外科的に切除したが，壊死組織のみで腫瘍細胞はみられなかった。手術後7ケ月局所再発及び転移は認められていない。

キーワード　進行性睾丸精上皮腫，化学療法，外科的切除，完全寛解