

MALIGNANT LYMPHOMA OF THE TESTIS PRESENTING AS PRIMARY TESTICULAR TUMOR

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A case of malignant lymphoma of the testis is presented. A 49-year-old male presented with swelling and dull pain of his left scrotal content. The initial clinical diagnosis was left testicular tumor. Left high orchiectomy was performed immediately after admission and histopathology showed malignant lymphoma, large cell type, B-cell type according to the Lymphoma Study Group (LSG) classification. Extensive investigations revealed clinical stage 1E, with no evidence of metastasis. Chemotherapy was initiated with vincristine, prednisolone, adriamycin and methotrexate (VEPA-M). After therapy, the patient is doing well without any evidence of metastasis.

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Key words: Malignant lymphoma, Testis, Chemotherapy

INTRODUCTION

Malignant lymphoma of the testis was first described by Malassez in 1877¹⁾. The disease is relatively rare in younger men but it commonly affects elderly men and accounts for 25 to 50 % of the testicular neoplasms among men more than 50 years old^{2,3)}. A review of the Japanese literature revealed a total of 178 cases of primary malignant lymphoma of the testis reported until 1990⁴⁾. Histopathologically, malignant lymphoma of the testis has been reported to be comprised exclusively of non-Hodgkin's lymphoma⁵⁾. Immunological and immunohistological studies showed that extragonadal non-Hodgkin's lymphoma was mostly of B-cell tumor type, especially in western countries⁶⁾. However, the incidence of T-cell lymphoma has been found to be more common in Japan than in western countries⁶⁾. Doxorubicin containing combination chemotherapy regimens are well-established chemotherapy treatments for advanced non-Hodgkin's lymphoma. In this case, the initial diagnosis was testicular tumor but histopathology showed malignant lymphoma and it responded well to combination chemotherapy (VEPA-M).

CASE REPORT

The patient first noticed dull pain and swelling of his left scrotal contents on 14th January, 1990. He visited a local hospital where the diagnosis of testicular tumor was made and the patient was referred to our department for further evaluation and treatment. On admission to our department, we found enlargement of the left testis (size : 7.0×5.0×5.5 cm) and there was slight tenderness. The consistency was hard, there was no skin adhesion and the skin colour was also normal. The epididymis, spermatic cord and the state of local lymph nodes all were normal. Ultrasonography of the scrotum showed a heterogenous area (Fig. 1) in the left testis. However, the right testis was normal. No abnormalities were found on the chest X-ray, routine blood and other biochemical examinations. Thus, with the provisional diagnosis of left testicular tumor, left high orchiectomy was performed. The size of the resected tumor was 5.7×3.8×3.7 cm and the weight was 79.4 g. Fig. 2 shows the cut section of the tumor. Macroscopically, the tumor was homogenous and grayish white in appearance. The histological finding was malignant lymphoma (Fig. 3). Immuno-

histological examination revealed diffuse, large cell type, B-cell type and immunophenotyping revealed LCA (+), Pan B (-), S-100 (-), Vimentin (-), Desmin (-) (Fig. not shown). Markers for testicular tumor and LDH isoenzymes were measured, but showed no abnormalities. To make a clinical staging, extensive investigations were performed, such as drip infusion pyelography, computed tomography, magnetic resonance imaging, Ga-

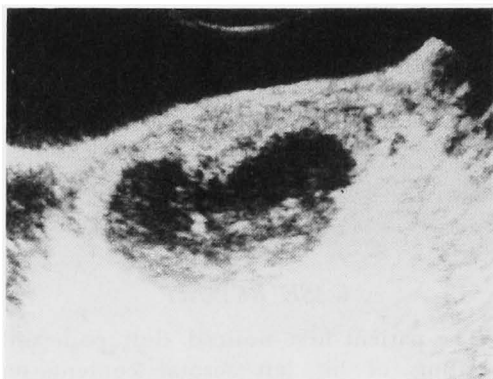


Fig. 1. Ultrasonography of the left testis, shows heterogenous area, suggestive of solid tumor.

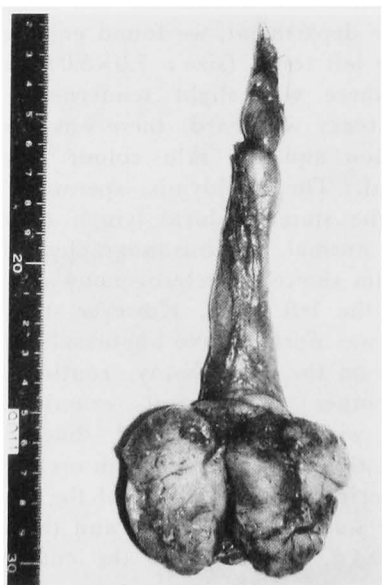


Fig. 2. Cut surface shows, the whole testis is replaced by tumor which is homogenous and grayish white in appearance. However, the epididymis is unaffected.

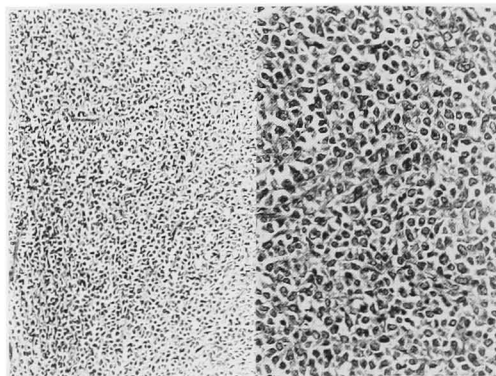


Fig. 3. Light microscopy reveals diffuse infiltrating tumor cells, mostly large cell type and the seminiferous tubules are atrophic. Left: H&E, reduced from $\times 50$ Right: H&E, reduced from $\times 100$

scintigraphy, bone scan and lymphangiography, but no evidence of metastasis was found. Our final diagnosis was malignant lymphoma, stage 1E.

After orchiectomy, the patient was treated with combination chemotherapy (one course) which is shown in Table 2. We have followed the patient for about 8 months and until now the patient is doing well without any evidence of local recurrence or systemic manifestation of malignant lymphoma.

DISCUSSION

Preoperative diagnosis of primary malignant lymphoma of the testis is difficult. Testicular lymphoma is frequently confused with seminoma^{7,8} and less often, as embryonal carcinoma. Other diseases that may be confused with testicular lymphoma include, granulomatous orchitis, pseudolymphoma and rhabdomyosarcoma⁸. A final and definitive diagnosis is possible in almost all the cases by histopathological examination after operation. Tests using monoclonal antibodies that react selectively with non-Hodgkin's lymphoma but not with any other nonlymphoid neoplasms are now easily performed on routine paraffin sections to differentiate the disease⁹. In this case also, the initial clinical diagnosis was testicular tumor but after orchiectomy the histopathological diagnosis was malignant lym-

Table 1. Combination chemotherapy schedule

VEPA-M	Day 1	Day 8	Day 15	Day 22	Day 29	Day 36
Vincristine 1 mg/m ² (iv)	↓	↓	↓	↓	↓	↓
Cyclophosphamide 350 mg/m ² (drip iv)	↓	↓	↓	↓	↓	↓
Prednisolone 40 mg/m ² /day (oral)	↓→5 days			↓→5 days		
Adriamycin 40 mg/m ² (iv)	↓			↓		
Methotrexate 400 mg/m ² (drip iv)	↓			↓		

phoma, diffuse, large cell type, B-cell type.

Although cases of complete remission have been reported⁴⁾ treatment of testicular lymphoma is still difficult. Surgery, radiotherapy and radiation plus chemotherapy have been used to treat stages IE and IIE testicular lymphoma⁵⁾. In some cases, stage IE testicular lymphoma has been treated by surgery alone^{7,10)}, while in others it has been treated with orchiectomy plus radiotherapy²⁾. However, due to the high incidence of relapse and frequent involvement of extragonadal sites such as, skin bone, CNS, liver, lungs and Waldeyer's ring aggressive therapy like systemic chemotherapy is recommended even in early stage disease.

Previous experience showed that in most of the cases, recurrence occurred within one to two years of diagnosis of testicular lymphoma and 88 % of the deaths occurred within the first two years³⁾. Other observations suggest a chance for long-term survival and cure in patients with testicular lymphoma who are in complete remission and have been disease-free for two years or longer. However, recent clinical experience using new chemotherapeutic regimens suggested that chemotherapy alone or chemotherapy plus radiotherapy could provide an 85 % survival rate free of disease^{11,12)}. Roche et al. applied 3 courses of combination chemotherapy (cyclophosphamide, vincristine, doxorubicin, bleomycin and prednisone) and radiotherapy (30 Gy of limited field radiotherapy) to 10 patients and found only 10 % recurrence at 30 months¹³⁾. In our case, although we did not find any evidence of local or distant metastasis (stage IE) by extensive investigation, we adopted systemic combination chemotherapy (Table 1) to prevent pos-

sible further recurrence. The followup period of this case was only 8 months, and not long enough to predict the final outcome of our treatment.

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REFERENCES

- 1) Malassez M. Lymphoma du testicule. Bull Soc Anta Paris 42: 176-178, 1877
- 2) Eckert H and Smith JP: Malignant lymphoma of the testis. Brit Med J 2: 891-894, 1963
- 3) Sussan AB, Hadju SI, Lieberman PH, et al.: Malignant lymphoma of the testis: A clinicopathologic study of 37 cases. J Urol 118: 1004-1007, 1977
- 4) Suzuki K, Ichinose Y, Matsumoto K, et al.: Malignant lymphoma of the testis: A case report. Nishinohon J Urol 52: 338-340, 1990
- 5) Doll DC and Weiss RB: Malignant lymphoma of the testis. Am J Med 81: 515-524, 1986
- 6) Shimoyama H, Ota K, Kikuchi M, et al.: The lymphoma study group Chemotherapeutic results and prognostic factors of patients with advanced non-Hodgkin's lymphoma treated with VEPA or VEPA-M. J Clin Oncology 6: 128-141, 1988
- 7) Hayes MMM, Sacks MI and Hing HS: Testicular lymphoma. A retrospective review of 17 cases. S Afr Med J 64: 1014-1016, 1983
- 8) Growing NCF: Malignant lymphoma of the testis. In: Pathology of the testis. Edited by Pugh RCB. pp. 334-355, Blackwell Scientific publication, London. 1976
- 9) Warnke RA, Gatter KC, Falini B, et al.: Diagnosis of human lymphoma with monoclonal antileukocytic antibody. N Engl J

- Med 309: 1275-1281, 1983
- 10) Johnson DE and Bulter TT: Malignant lymphoma of the testis. In: Testicular tumors. Edited by Johnson DE, pp. 234-248, HK Lewis London, 1976
- 11) Connors JM, Klimo P, Fairey RN, et al.: Brief chemotherapy and involved field radiation therapy for limited stage, histologically aggressive lymphoma. Ann Int Med 107: 25-30, 1987
- 12) Cabanillas F, Bodey GP and Freircich EJ: Management with chemotherapy only of stage I and II malignant lymphoma of aggressive histologic types. Cancer 46: 2356-2359, 1980
- 13) Roche H, Suc E, Pons A, et al.: Stage IE non-Hodgkin's lymphoma of the testis: A need for brief aggressive chemotherapy. J Urol 141: 554-556 1989

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和文抄録

精巣悪性リンパ腫の1例

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今回われわれは精巣悪性リンパ腫の1例を経験したので報告する。症例は49歳, 男性で左陰嚢内容の腫脹および疼痛を主訴に当科初診。左精巣腫瘍の診断にて入院後, 左高位精巣摘除術を行った。摘出標本の病理はを L.S.G. 分類上 diffuse type, large cell type, B-cell type であり臨床病期は IE 期であった。術後

ビンクリスチン, サイクロフォスファミド, プレドニゾロン, アドリアマイシン, メソトレキセートを併用した化学療法を1コース行ったのち退院す。現在外来にて経過観察中である。

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