
症 例

A Case of Advanced Male Breast Cancer Successfully Treated by 5-Fluorouracil, Epirubicin and Cyclophosphamide Chemotherapy Combined with Tamoxifen

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Abstract

A 79-year old male advanced breast cancer patient with metastases in lymph nodes, bones and anterior chest wall was effectively treated by a combination of chemotherapy (5-fluorouracil, epirubicin and cyclophosphamide), tamoxifen and minor surgery. Two months after five cycles of chemotherapy, all lymph node swellings disappeared. The main breast cancer and the chest wall metastatic nodule were resected under local anesthesia. He was maintained on tamoxifen alone and showed no lymph node recurrence during the follow up period of 20 months, suggesting good control of bone metastatic lesions.

Introduction

Combination chemotherapy with 5-fluorouracil, adriamycin (doxorubicin) and cyclophosphamide (FAC therapy¹⁾) has a higher efficacy than other chemotherapy regimens in the treatment of advanced or recurrent breast cancer although complete remission is rare. In this communication we describe a rare case of advanced male breast cancer successfully treated by a variant method of FAC therapy (5-fluorouracil, epirubicin, cyclophosphamide and tamoxifen).

Case Report

A 79-year old man consulted our outpatient clinic on October 16, 1992, for clinical examination of two abnormal chest wall masses. The patient had noticed an induration of the left mammary gland in 1989, which increased in size gradually and was occasionally painful.

Key words: Male breast cancer, FAC chemotherapy, Epirubicin, Tamoxifen.

索引用語: 男性乳癌, FAC 化学療法, エピルビシン, タモキシフェン.

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On physical examination the patient had two masses on his left anterior chest wall. The main tumor was located beneath the left nipple and about 18 mm in diameter. The satellite nodule was an intradermal mass located medial to the left nipple and about 15 mm in diameter. Both of the masses had a hard consistency. Many swollen lymph nodes were palpable in the left axillary and left supraclavicular regions. The sizes of main three axillary lymph nodes measured by ultrasonogram were 13 mm, 7.5 mm, 6 mm in diameter, respectively. Two masses consisted of conglomerate lymph nodes in the medial supraclavicular region were about 3 cm long, and the sizes of several lymph nodes in the lateral supraclavicular region were within 18 mm (Fig. 1, 2 and 3).

Aspiration cytology revealed cancer cells in the main tumor on the day of his admission (October 22, 1992). Bone scintigram on October 28 detected multiple isotope (^{99m}Tc)-uptake spots in the sternum, left scapula, 10th thoracic vertebra, left hip joint, left 5th rib and right 8th rib, although he had no bone pain (Fig. 4). Later, nuclear magnetic resonance (NMR) imaging demonstrated bone metastasis to the 10th thoracic vertebra (Fig. 5a), while computed tomography (CT) revealed no brain, lung or liver metastasis. Extirpational biopsy of the satellite nodule performed under local anesthesia on November 4, 1992 revealed the existence of invasive ductal carcinoma (scirrhous carcinoma). Examinations for estrogen and progesterone receptors were both positive. Tamoxifen (Nolvadex) administration was initiated after examination revealed positive estrogen receptors on cancer cells. Chemotherapy was started on November 5, 1992, consisted of intravenous administration of 5-fluorouracil (5-FU) 750 mg, epirubicin (Farmorubicin) 20 mg or 30 mg and cyclophosphamide (Endoxan) 800 mg at two or three weeks intervals. A total of five cycles of this regimen were completed on December 24, 1992. The total doses were 3750 mg of 5-FU, 120 mg of epirubicin, and 4000 mg of cyclophosphamide. One month after the beginning of chemotherapy, a reduction in size of the swollen left supraclavicular lymph nodes was noticed initially, followed by a reduction tendency in all lymph nodes in the axillary and supraclavicular regions. He discharged on

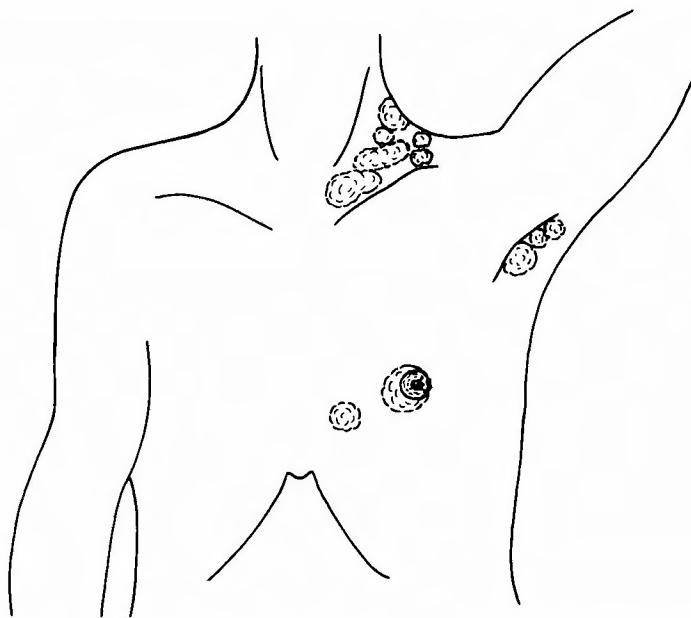


Fig. 1 Schema of main tumor, satellite nodule and lymph node swellings.

December 28, 1992, upon his request to spend the New Year at home. Oral administration of a compound product of tegafur and uracil (UFT) was also started before his discharge but the patient refused to take UFT approximately one month afterward because of anorexia. He was followed at our outpatient clinic with the administration of tamoxifen alone. In march 1993, all lymph node swellings disappeared, but the primary tumor beneath the left nipple remained. A simple mastectomy was performed under local anesthesia at our outpatient clinic. The tumor was diagnosed pathologically as an invasive ductal carcinoma (papillotubular carcinoma and scirrhous carcinoma) of the left

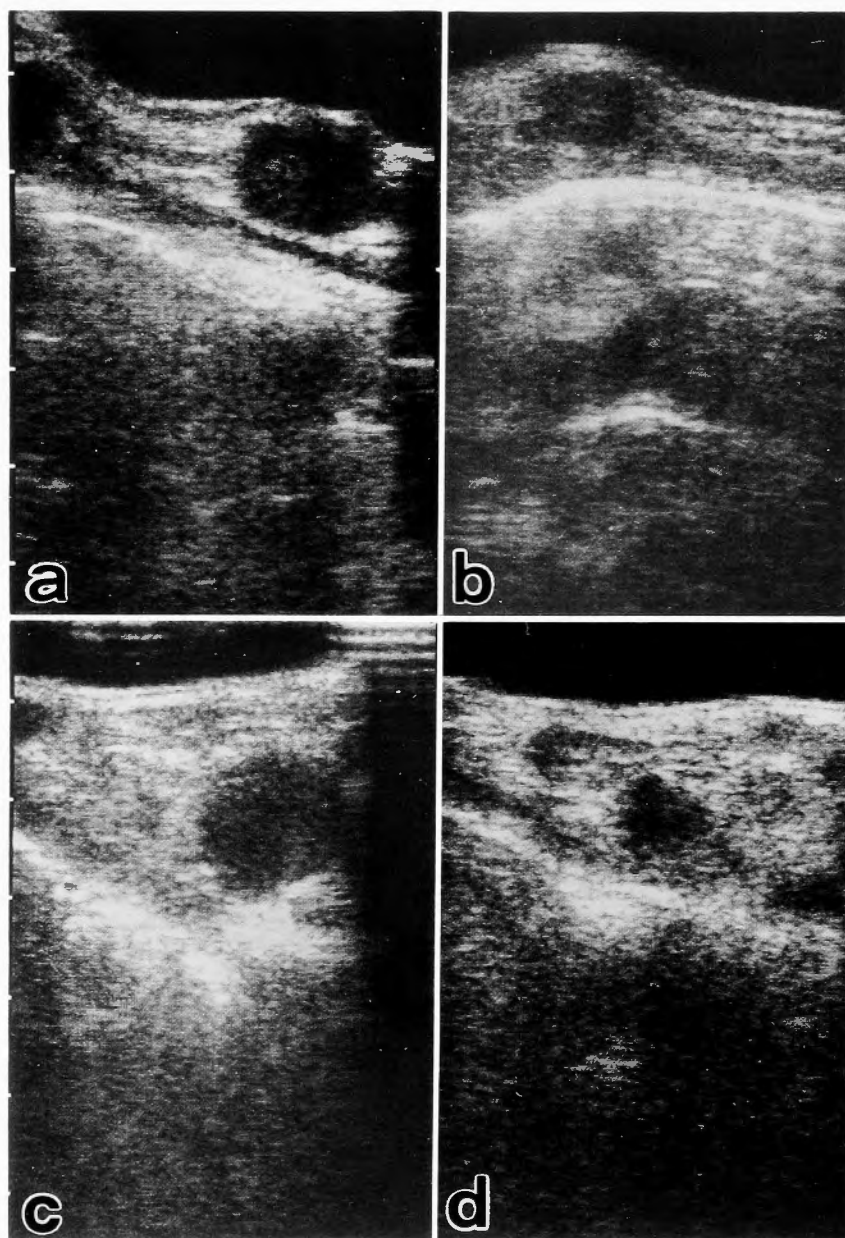


Fig. 2 Ultrasonograms of main tumor (a), satellite nodule (b) and main axillary lymph nodes (c, d)

breast. His follow-up was continued at our outpatient clinic with the administration of tamoxifen alone, and neither lymph node nor chest wall recurrence was detected. A bone scintigram conducted in June 1994 demonstrated increased isotope uptake in the 10th thoracic vertebra and right 8th rib compared to the scintigram of October 1992, but other multiple hot spots had attenuated (Fig. 6). Bone metastasis to the 10th thoracic vertebra was again diagnosed by NMR imaging in July 1994 and judged worse than 20 months before (Fig. 5b), nevertheless the patient had no backpain.

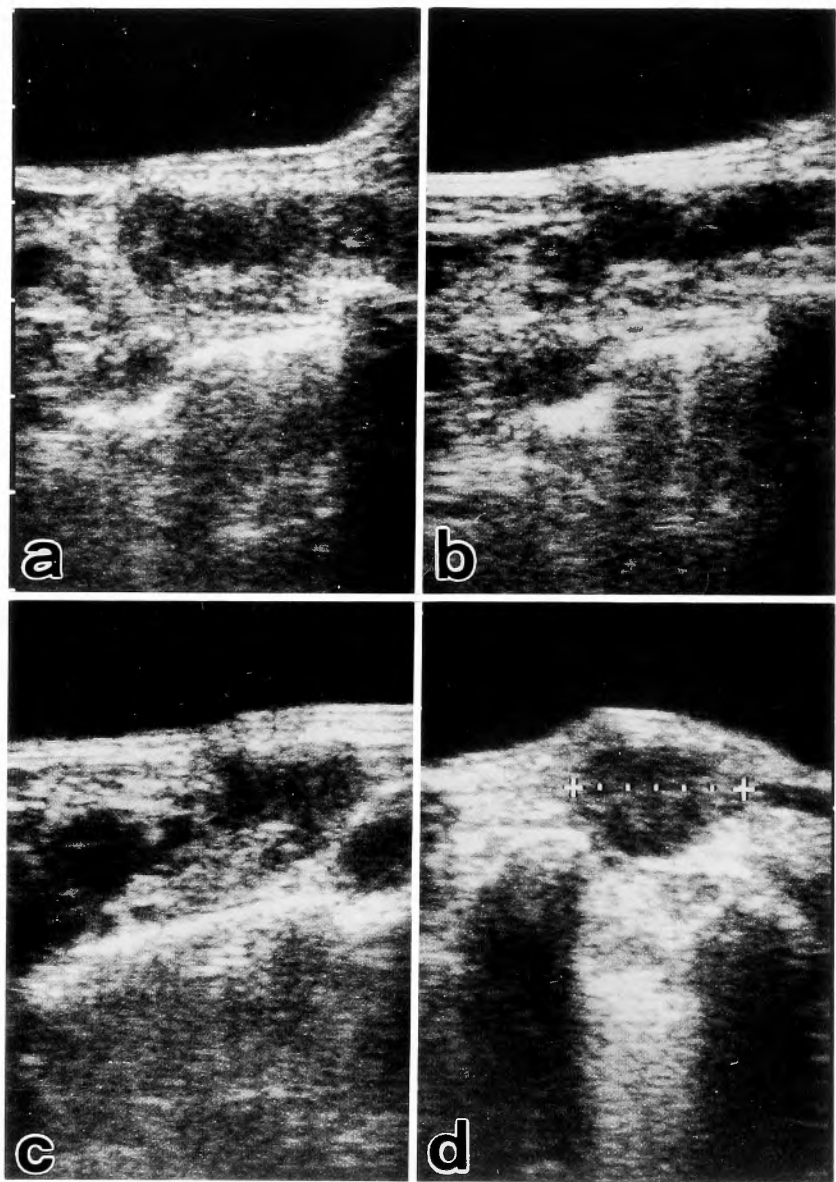


Fig. 3 Ultrasonograms of two masses consisted of conglomerate lymph nodes in the medial supraclavicular region (a, b) and lymph nodes in the lateral supraclavicular region (c, d)

He again admitted on July 14, 1994 for radiation treatment of the 10th thoracic vertebra and right 8th rib, which were irradiated with 50 Gy and 48 Gy, respectively. He is now well doing and followed up at our outpatient clinic with the administration of tamoxifen alone.

Discussion

Male breast carcinoma is a rare neoplasm which accounts for less than 1% of all breast carcinomas. Nevertheless, the overall pattern of progression and prognosis of the disease in the male are reported to be comparable to those of the female²⁾. Most of the male breast cancer patients consult surgeons too late because of a lack of knowledge, that makes the prognosis worse. Our patient also had noticed an induration of left mammary gland for two years before he consulted us.

FAC chemotherapy or CAF chemotherapy³⁾ (oral administration of cyclophosphamide) is well known as the best regimen for treating advanced or recurrent breast cancer although reports of complete remission are rare. In one report⁴⁾, a 45y.o. female with recurred breast cancer in the chest

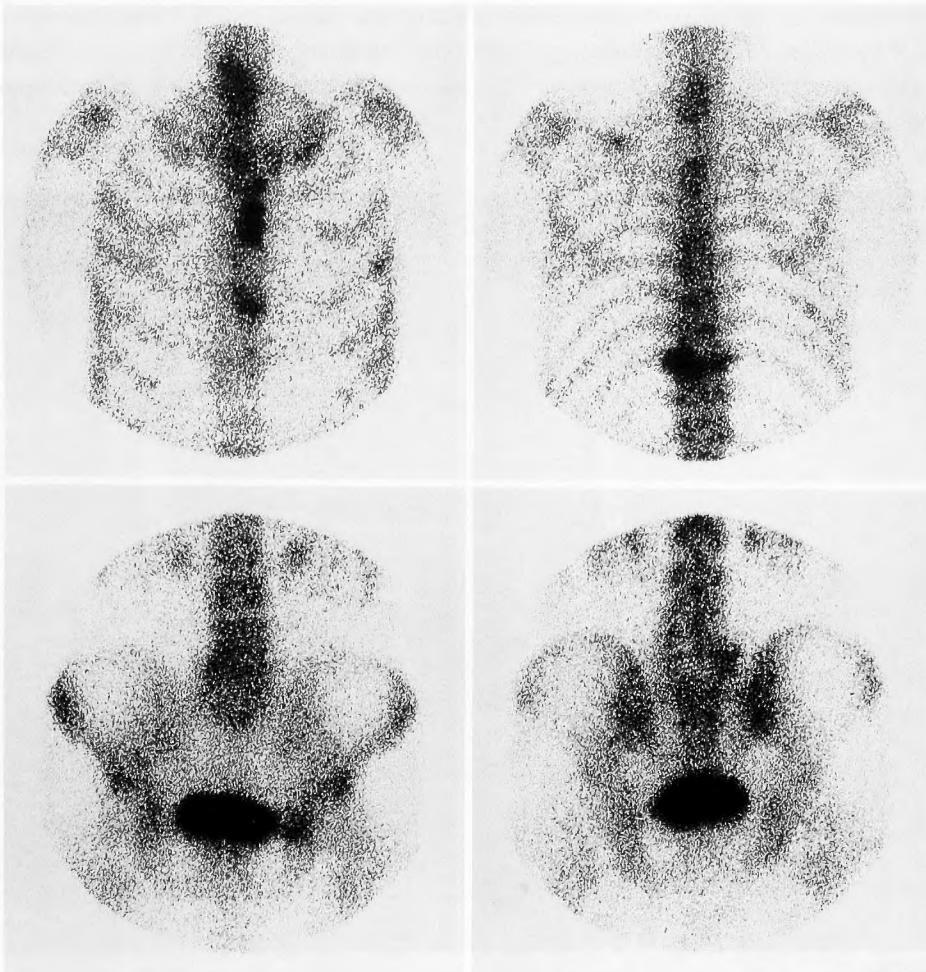


Fig. 4 Bone scintigram in October 1992. Multiple isotope (^{99m}Tc)-uptake spots were detected.

wall, supraclavicular lymph nodes and pleura achieved long-term complete remission by CAF therapy consisting of a total adriamycin dose of 300 mg.

Recently, epirubicin is oftenly used as the main agent in the chemotherapy of breast cancer instead of adriamycin because of its identical effectiveness as adriamycin but less side effects, especially gastrointestinal, hematologic and cardiac toxicities, making it possible to increase the total dose of epirubicin⁵⁾. In another report⁶⁾, a 52y.o. female with unresectable advanced giant breast cancer and metastasis to the thoracic vertebra was successfully treated by two cycles of CEFT therapy (oral cyclophosphamide, intravenous epirubicin and 5-FU, tamoxifen) which consisted of an epirubicin dose of 50 mg/m² per cycle.

We chose epirubicin for our patient because of his old age and possible cardiac disorder. A total of 120 mg epirubicin was administered. No serious complications were observed during five cycles of FAC chemotherapy. Combined with local excision, our patient achieved almost complete remission except bone metastases to the 10th vertebra and right 8th rib, which were treated by radiation therapy 19 months later. Now he maintains clinically good condition, and is enjoying a normal daily life free of symptoms.

In summary, we effectively treated an old male patient with advanced breast cancer by a combination of a variant of FAC chemotherapy, tamoxifen and minor surgery. Appropriate chemo-endocrine therapy regimen should be selected for advanced breast cancer patients, and appropriate doses should be selected for aged patients.

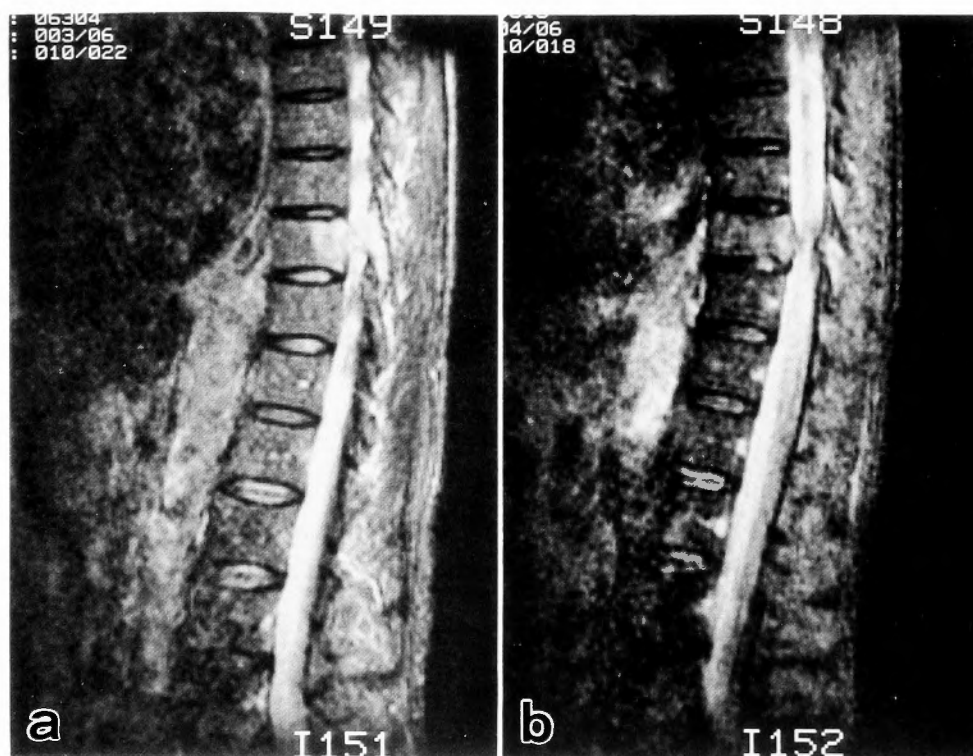


Fig. 5 NMR imagings of vertebrae in November 1992 (a) and in July 1994 (b). The 10th thoracic vertebra progressed compression fracture during the 20 months.

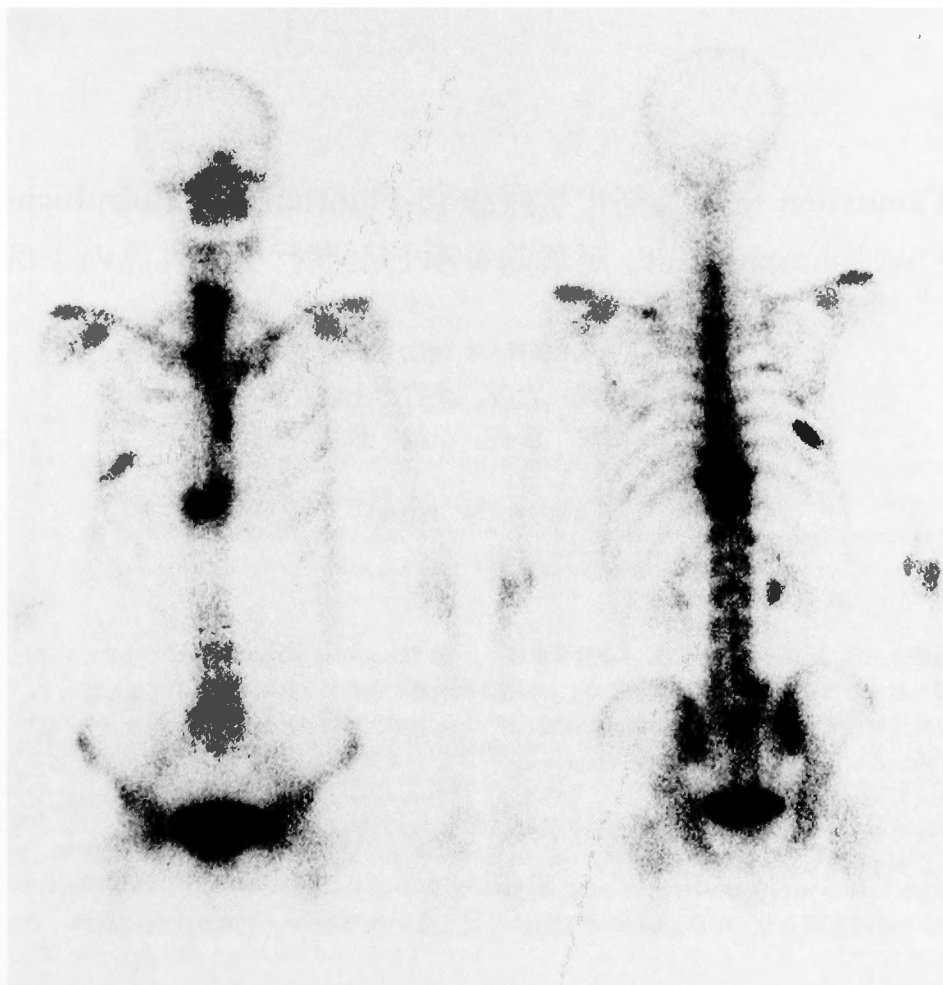


Fig. 6 Bone scintigram in June 1994 demonstrated increased isotope uptake in the 10th thoracic vertebra and right 8th rib.

References

- 1) Hortbagyi GN, Gutterman JU, Blumenschein GR, et al: Combination chemotherapy of metastatic breast cancer with 5-fluorouracil, adriamycin, cyclophosphamide and BCG. *Cancer* 43: 1225-1233, 1979.
- 2) Yap HY, Tashima CK, Blumenschein GR, et al: Male breast cancer. *Cancer* 44: 748-754, 1979.
- 3) Bull JM, Tormey DC, Li SH, et al: A randomized comparative trial of adriamycin versus methotrexate in combination drug therapy. *Cancer* 41: 1649-1657, 1978.
- 4) Nakaguchi K, Nakano Y, Kitahara T, et al: A case of multiple organ recurrence of breast cancer showing long-term complete remission by CAF therapy. *J Jpn Soc for Clinical Surg* 52: 2606-2609, 1991.
- 5) Brambilla C, Rossi A, Bonfante V, et al: Phase II study of doxorubicin versus epirubicin in advanced breast cancer. *Cancer Treat Rep* 70: 261-266, 1986.
- 6) Yano M, Kume K, Ono E, et al: A case of giant advanced breast cancer responding remarkably to CEFT

therapy. Jpn J Cancer Chemother 20: 1067-1070, 1993.

和文抄録

Tamoxifen 併用多剤化学療法 (5-Fluorouracil, Epirubicin, Cyclophosphamide) が著効を示した進行男性乳癌の1例

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多発性鎖骨上窩, 腋窩リンパ節転移, 多発性骨転移, 胸壁転移を有する79歳男性進行乳癌症例に対し, 胸壁転移巣切除生検にて Estrogen 受容体陽性を確認したのち, Tamoxifen 併用多剤化学療法 (5-Fluorouracil, Epirubicin, Cyclophosphamide) を施行した. 化学療法5回終了後約2ヶ月ですべてのリンパ節腫脹の消失をみたため, 外来にて単純乳房切断術をおこなった. 以

後 Tamoxifen のみの投与にて外来で追跡し, 化学療法終了後約20ヶ月間リンパ節再発を認めず, 骨転移巣も良好に制御された. 現在, 患者は全く愁訴なく元気に日常生活を送っている. 小手術と組み合わせた Tamoxifen 併用多剤化学療法が著効を示した男性進行乳癌の1例を報告した.