

CLINICAL CASE

Successful palliative treatment of an inoperable giant squamous skin cancer: a case report

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Summary

A 63-year-old male patient with locally advanced stage giant squamous cell skin cancer in the back was admitted to our clinic. He was treated by radiotherapy with palliative intent and achieved a nearly complete response. However, the tumor recurred 3 times after various palliative treatments (surgery, chemotherapy). The tumor finally progressed and the patient died 28 months after his

first admission to the clinic. We present this case because of the unexpectedly excellent response to radiotherapy and achievement of successful palliation with other treatment modalities.

Key words: chemotherapy, giant tumor, radiotherapy, squamous cell skin cancer, surgery

Introduction

Skin is the largest organ of the body. It is always in contact with the environmental carcinogens. Therefore, the most common cancer encountered in humans originates from the skin. Approximately one million new cases of basal and squamous cell carcinoma, 50,000 melanomas, and 5,000 non-epithelial skin cancers occur and 2,000 patients with non-melanoma skin cancer die yearly in the United States [1]. The mortality rate from non-melanoma skin cancers is nearly 0.4% [2]. The importance of the rising incidence of skin cancer is partly due to the depletion of the ozone layer of the upper atmosphere. Eighty-ninety percent of skin

cancer originates in the head and neck region which is the region most exposed to sunlight [2].

Treatment with surgical excision, Mohs' micrographic surgery (also known as chemosurgery), radiotherapy, cryotherapy, laser excision or curettage and electrodesiccation can be used in the management of early stage non-melanoma skin carcinoma [2-4], whereas surgery [2,3] or combined treatment modality (surgery and postoperative radiotherapy) [1,2,4,5] is used in the treatment of locally advanced disease stage (massive tumor, perineural, cartilage and bone involvement, lymph node metastases and incomplete excision) or difficult recurrent lesions. Elderly patients and those in poor medical condition are treated with primary radiotherapy; unresectable or extensive skin cancers may also be treated by radiotherapy under selected circumstances with palliative or radical intent [1,2].

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Case presentation

In September 1997 a 63-year-old male patient was admitted to the Institute of Oncology, University of Istanbul, because of a growing mass in the skin of his back, causing bleeding, infection, pain and symp-

toms due to anemia. He had a history of gastritis and untreated schizophrenia for 2 years. The tumor had increased in size during 15 years, and the patient had refused surgical excision 2 years ago.

Examination revealed a giant tumor 25×20 cm in diameter, which was located in the skin of the interscapular region, involved deep tissues including vertebral spinous processes (Figure 1). On physical examination he was anemic and was not cooperative with the doctor. His hemoglobin was 5.8 g/dl. Biopsy revealed squamous cell carcinoma of the skin. He received blood transfusions, supportive therapy and prophylaxis for meningitis. The tumor was unresectable and staged as T4N0M0. Palliative radiotherapy was planned for the patient, but because the electron treatment unit was out of order, he was treated with orthovoltage x-ray therapy in October 1997 with 200 kV, 1 mm copper filter, 40 cm focus-skin distance and 20×24 cm cones. Since the largest cones did not include the whole tumor, two posterior fields (upper and lower) were used. At 4200 cGy dose level, a lead plate 2 cm

wide and 2 mm thick was placed over the spinal cord for radioprotection. A total tumor dose of 5400 cGy in 27 fractions was given during 5.5 weeks.

Three months later, the tumor had regressed and the patient complaints were alleviated. Figure 2 shows almost complete response of the giant skin tumor to radiotherapy. Nine months later the tumor recurred in the midline region, which was protected by the lead plate, and was locally removed by surgery. The tissue defect was covered with flap. The excised tissue revealed that the surgical margins were infiltrated by cancer cells. No adjuvant treatment was given. Six months later, a second local relapse occurred and combination chemotherapy with cisplatin (50 mg/m²) and doxorubicin (50 mg/m²) was administered every 3 weeks, resulting in only minimal tumor regression after 3 cycles. During follow-up the tumor progressed and pain became a serious problem. Second-line chemotherapy consisting of cisplatin 25 mg/m²/weekly and 24 h continuous infusion 5-FU 300 mg/m²/day for 5 consecutive days every 3 weeks was administered. Later, cisplatin was withdrawn because of renal toxicity, and assessment



Figure 1. A neglected giant skin tumor located on the back, reaching a giant size in 15 years.

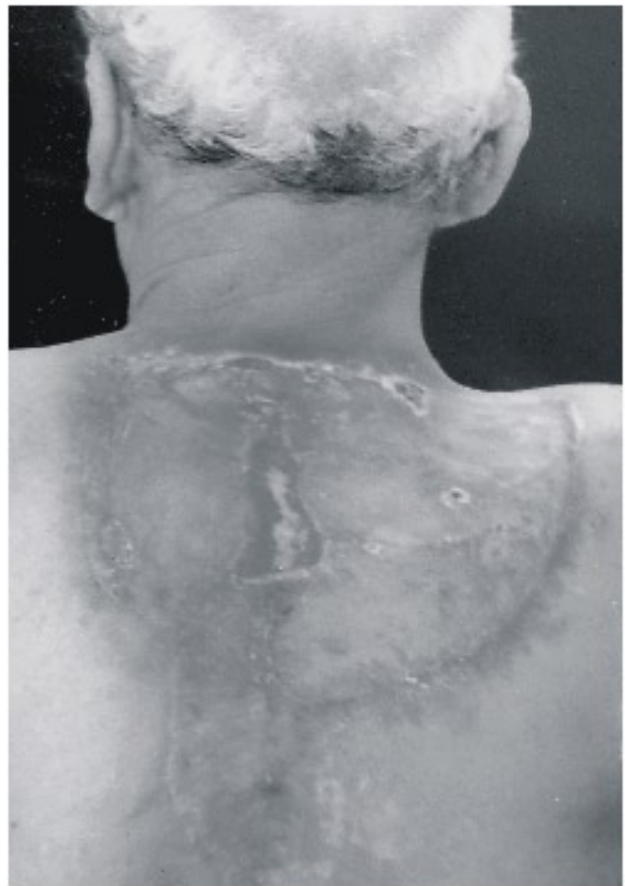


Figure 2. An almost complete response of the giant skin carcinoma to palliative radiotherapy.

of CT scan revealed tumor progression. He eventually died of progressive disease.

Discussion

Basal cell and squamous cell carcinoma together make up approximately 95% of all primary malignant skin lesions [4]. For most lesions, surgical excision or radiation therapy offer equivalent cure rates [2,4]. Factors to be considered in treatment selection include tumor stage, tumor size, depth of invasion, anatomic location, involvement of adjacent cartilage or bone, tumor histology and grade, primary or recurrent disease, single or multiple, previous treatment and general medical condition of the patient [2-4, 6].

While kilovoltage-orthovoltage x-rays, brachytherapy or megavoltage electrons are the radiotherapeutic treatment of choice in the management of early stage skin carcinomas [3,4], megavoltage x-ray, gamma rays or the use of megavoltage electrons with bolus (tissue equivalent material to maximize the surface dose and reduce the depth dose) are more appropriate treatment methods for advanced skin cancers (extensive bone and soft tissue involvement and lymph node metastasis) [2-4]. In our hospital, early stage skin cancers selected for radiotherapy are generally managed with 100-150 kV x-rays or 6-9 MeV electrons. However, megavoltage electrons have been used more frequently in recent years. Selection of appropriate photon or electron energy level of treatment is done by inclusion of the tumor volume to 85-90% depth dose line of the appropriate energy level [4]. For regional lymph node metastases, involvement of deep tissues or extensive bone invasions (T4N1-3M0), Co-60 treatment is applied and the placement of a 0.5-1 cm bolus material is necessary [3,4].

Because of the presence of a giant tumor and large lung tissue behind the tumor area, the patient was not suitable for treatment with Co-60. Therefore, appropriate treatment was delivered by 200 kV, 1 mm copper filter. The depth dose was 82% at 3 cm depth. Since the treatment field included a long segment of the spinal cord, spinal cord protection was introduced at 4200 cGy dose level. It was not surprising that the tumor recurred in the midline, which was protected by lead shield, and had received sublethal tumor dose.

Radiotherapy is very effective in the treatment of small and middle sized skin carcinomas and can cure 85-95% of them [2,5,7,8]. The control of tumor is dependent on stage, size, histology, presence of bone and nerve involvement, localization, presence of recurrence and radiotherapy treatment factors [5,8-10].

Tumor control rates by radiotherapy for tumors less than 1 cm is 91 and 97%, between 1-5 cm is 76 and 87%, and for tumors larger than 5 cm is 56 and 87% for basal cell and squamous cell cancers, respectively [8]. In large tumors with extensive bone involvement and lymph node metastases locoregional control and cure rates are low [5,6,9,10]. Patients treated with radiotherapy for extensive bone, cartilage and nerve involvement (T4), lymph node metastasis, intracranial invasion or recurrent tumors have poor prognosis [10,11]. Five-year control rate for T4 skin carcinomas with radical radiotherapy can be achieved approximately in 50% (80% with surgical salvage) of the cases [11,12]. Five-year survival rate of patients with lymph node involvement is 20-50% [13].

Chemotherapy is used as adjuvant in patients with advanced skin tumors after radical primary local treatment (surgery and/or radiotherapy), or for palliation in patients with distant metastases [6]. Cisplatin, 5-FU, bleomycin, doxorubicin or their combinations have shown useful activity in advanced stage skin cancers [14]. Patients treated with chemotherapy alone can achieve a 70-80% response rate with 30% of them being complete responses [14].

Our patient presented to our clinic with poor general condition, pain, bleeding and infection of the giant skin squamous cell carcinoma located in the interscapular region of the back and received different palliative treatments. The size of the tumor was reduced, symptoms were relieved, and the quality of his life was improved for a considerable length of time.

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