

Squamous Cell Carcinoma of the Head and Neck: Dramatic Response to Chemoradiotherapy

Ahmad Mosalaei[♦], Seyed Basir Hashemi^{**}, Sanaz Sedaghat^{*}

**Department of Radiation Oncology, Nemazee Hospital, Shiraz University of Medical Sciences, Shiraz, Iran*

***Department of Ear, Nose and Throat, Khalili Hospital, Shiraz University of Medical Sciences, Shiraz, Iran*



Figure 1. Before treatment.



Figure 2. After treatment.

Case Presentation

A 70 year-old man presented to the Radiation Oncology Department of Nemazee Hospital affiliated with Shiraz University of Medical Sciences, with a large tumor- like lesion on his face (Figure 1). The patient developed the lesion five years prior to his referral. The lesion over his right cheek extended gradually to involve an extensive area of his face and intraorbital cavity.

He did not seek medical treatment for five years, with the exception of traditional medications with which he had not achieved any response. In the initial evaluation, a biopsy was taken from the lesion, which revealed diagnosis of poorly differentiated squamous cell carcinoma (SCC). Further investigations included chest x-ray, abdominal ultrasonography, complete blood count, blood chemistry, renal and liver function

♦Corresponding Author:

Ahmad Mosalaei, MD, Radiation Oncology Department, Nemazee Hospital, Shiraz, Iran
Tel: +98-711-6474320
Fax: +98-711-6260135
E-mail: mosalaa@sums.ac.ir

tests, none of which showed evidence of distant metastases. Paranasal CT scan revealed no abnormal findings in the bone or deep structures of the face except for skin and subcutaneous involvement. Since a surgical procedure was impossible for the management of such an extensive tumor, which had intraorbital involvement, chemoradiotherapy was initiated. Chemotherapy with Cisplatin (100 mg/M²) and 5-FU (1000 mg/M²) was administered for six times each one 3 weeks apart. Radiation to the entire lesion with proper shielding of the globe was also initiated and he received 6000 cGy radiation to his face with an electron beam in conventional fractionation. Two months later he returned to the clinic with erythema on his face, however minimal ulceration was present (Figure 2). The patient is now clinically well and has no evidence of disease several years following treatment.

Discussion

Squamous cell carcinoma is the fifth most common cancer worldwide. Two-thirds of the cases of SCC of the head and neck show only locally advanced tumor or regional lymph node involvement. The others present with metastasis to other organs such as the orbit and intracranial cavity. Investigations have revealed that cancers with an epithelial origin such as SCC of the head and neck arise from a series of genetic events that influence key molecules and biologic pathways.¹

The best treatment for locally advanced SCC is a matter of debate.² If cancer is in its early-stages (stages I and II) it often will be curable with either radiotherapy or surgery alone, but in advanced stages (stages III and IV, M0) chemotherapy should be added to obtain the best results.³ If surgery cannot be performed, patients should undergo radiotherapy or chemoradiotherapy. For many years, radiotherapy has been a good choice for patients with unresectable tumors. However,

the survival rate has been reported to be less than 25%; although the addition of concurrent chemotherapy has improved the prognosis of those patients. In spite of the current evidence that a chemoradiotherapy regimen is associated with severe acute toxicity and even related deaths,² some studies have shown that administration of radiotherapy and chemotherapy (cisplatin and 5-FU) result in an impressive rate of complete response.⁴

Recently, the majority of studies have focused on non-surgical approaches and many trials have shown the efficacy of concurrent chemoradiotherapy that improve survival while preserving organ function.⁵

In our case, the patient had a highly developed SCC of the facial skin without metastasis to other organs. A close review of the histopathology slides eliminated the possibility of lymphoma or melanoma. Surgery was not possible due to the extensive nature of the tumor on the patient's face and orbital cavity. Consequently intensive chemoradiotherapy was initiated and the patient showed a dramatic response to treatment.

The role of intensive chemoradiotherapy was well illustrated in this case. Based on this experience, we recommend administration of an intensive chemoradiotherapy regimen in cases with locally advanced tumors without metastases. Indeed it seems that the benefits of this treatment outweigh its disadvantages.

However, since the selection of the best choice of treatment for these cases is still controversial, more studies are needed before reaching any definite conclusions.

References

1. Suzuki S, Ishikawa K. Safety and efficacy of S-1 chemotherapy in recurrent/metastatic head and neck cancer. *Infect Chemother* 2009;15(5):335-39.
2. Tribius S, Kronemann S, Kilic Y, Schroeder U, Hakim S, Steven E, et al. Chemoradiotherapy including cisplatin alone versus cisplatin + 5-fluorouracil for

- locally advanced unresectable stage IV squamous cell carcinoma of the head and neck. *Strahlenther Onkol* 2009;185(10):675-81.
3. Haddad R, Colevas D, Tishler R, Busse P, Goguen L, Sullivan CH, et al. Docetaxel, cisplatin, and 5-fluorouracil-based induction chemotherapy in patients with locally advanced squamous cell carcinoma of the head and neck. *Cancer* 2003;97(2):412-18.
 4. Posner MR, Haddada RI, Wirth L. Induction chemotherapy in locally advanced squamous cell carcinoma of the head and neck: Evolution of the sequential treatment approach. *Semin Oncol* 2004;31(6):778-85.
 5. Kathryn A, Lee H, Edward S. Targeted therapies in squamous cell carcinoma of the head and neck. *Cancer* 2009;115(5):922-35.