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Case report

Giant locally advanced and metastatic squamous cell skin carcinoma of head and neck region: case report

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ARTICLE INFO

Article history:
Received 11 March 2019
Received in revised form
23 July 2019
Accepted 15 October 2019
Available online 12 November 2019

Keywords:
Skin cancer
Recurrent tumor
Head
Neck
Radiotherapy

ABSTRACT

Introduction: At the present time, the skin tumors are among the most common cancers. Optimal therapy is based on the extent of the disease and the age of the patient. The need for radiotherapy occurs for inoperable locally advanced tumors and in the event of failure, salvage surgery is applied.
Materials and methods: We provided a case report of an older patient with giant squamous cell skin carcinoma and a review of published articles.
Results: We present a rare case of giant squamous cell skin carcinoma with metastatic satellite tumors that was primarily treated with curative radiotherapy. Five months after radiotherapy, a recurrent tumor was detected at the site of origin and the treatment was completed by salvage surgery. Full remission was achieved for four years.
Conclusion: Despite the seemingly incurable finding it is always necessary to consider radical treatment regardless of the patientś age. Curative treatment could achieve long term remission in the group of older patients.

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https://doi.org/10.1016/j.rpor.2019.10.009

1. Introduction

Nonmelanoma skin cancers are generally the most common tumors in older patients. The incidence of nonmelanoma skin cancer has an increasing tendency worldwide. The most common risk factors include skin phenotype, long-term UV exposure and immunosuppression. Optimal therapy is based on the extent of the disease and the age of the patient.[1,2]

2. Materials and methods

We provided a case report of an older patient with giant squamous cell skin carcinoma and a review of published articles.

3. Results

From the year 2008, a lump was gradually growing on the right side of the neck in the 66-year-old patient. In September 2013, the CT scan revealed an enormous inoperable tumor mass 150 × 80 mm, infiltration of prevertebral muscles and right sternocleidomastoid muscle, multiple ipsilateral lymphadenopathy and two satellite tumors in adjacent paravertebral muscles (Fig. 1). Histologically, the tumor was verified as well-differentiated squamous cell carcinoma (SCC).

Radiotherapy was performed on a linear accelerator using dynamic intensity-modulated radiation therapy with simultaneous integrated boost. The prescribed doses were delivered to the primary tumor, positive lymph nodes (LNs), satellite tumors/ other high risk ispilateral LNs/ other LNs were 70 Gy/59.4 Gy/ 54 Gy in 33 fractions. The therapy was terminated in January 2014 (Fig. 2).

Five months after the end of radiotherapy, MRi of the neck was performed that revealed suspected cutaneous and subcutaneous tumor recurrence in the right submandibular region at the level of the hyoid bone. In August 2014, salvage surgery was performed involving radical resection of suspected tumor recurrence, supraclavicular flap reconstruction, bilateral LNs dissection. Histological finding was a tumor 80 x 30 mm in size with microscopic lesions of well-differentiated invasive SCC, nine negative LNs and resection margins were at least 6 mm.

Fig. 2 – Local finding one month after radiotherapy.

The surgical wound was healing by secondary intention with temporary paresis of the marginal mandibular branch of the facial nerve.

At the last check-up in October 2018, the patient was without local and distant recurrence (Fig. 3).

4. Discussion

In this case we show that even today we can see very gigantic and metastatic skin cancers in an older adult. The choice of appropriate treatment depends on a number of factors. The age is one of the most important factors which could affect potential intensity of cancer treatment. Less intensive oncology treatment is chosen for a large group of patients which results in worse treatment outcomes.[2,3] Our patient was initially treated with radical radiotherapy without chemotherapy even though there was a huge local cancer disease with metastatic LNs involvement and metastatic satellite tumors in paravertebral muscles. The addition of chemotherapy to radiotherapy remains controversial among older patients. There are randomised trials which confirm that the addition of chemotherapy improves local control and overall survival.[4,5]

Fig. 1 – Giant neck tumor(left) and CT with primary and satellite tumors (right).

Fig. 3 – The patient 3 years after treatment.

On the other hand, VanderWalde et al. analysed a group of 10,000 patients outside randomized trials. The results of this study showed that the addition of chemotherapy to the radiotherapy does not improve overall survival versus radiotherapy alone.[6]

The patient experienced early recurrence at the region of the primary tumor. Recurrence could not be reliably distinguished from persistence (despite negative MRi three months after treatment). The time to recurrence of the primary tumor after initial radical therapy is different. In a report by Dean et al.,[7] 5.7 months were described, ranging from 1 to 41 months. In 83.3% of cases the recurrences invaded to the deep extradermal structures.

The patient underwent radical resection of suspected tumor recurrence and bilateral neck dissection. Salvage surgery is a suitable method for cancer recurrence. It depends on the extent of recurrence, the risk of lymph node involvement, reconstructive surgery and preoperative comorbid conditions in the older patients. Dean et al.[7] further stated that in 66.7% of patients recurrence surgery was supplemented with neck dissection due to the risk of metastatic involvement. LNs involvement was confirmed in 43.7% of patients who had undergone neck dissection and correlated with advanced T-stage (83.3% of patients). Long-term salvage surgery results were reported in the study by Al-Othman et al.,[8] where the local control in advanced skin tumors treated with definitive radiotherapy was only 53% after 5 years. In the case of salvage surgery in patients who had undergone cancer treatment with primary radiotherapy, local control can reach up to 90% after 5 years and 85% after 10 years. Goodwin et al.[9] indicated that the 5-year overall survival in patients after salvage surgery was 39.4%. Better results of cancer-specific survival were achieved in patients with early stages (stages I-II) compared with patients with advanced stages (stages III–IV).

Another important factor that affects the long-term results of salvage surgery is the size of the recurrent tumor (T-stage). Kim et al.[10] reported the rate of recurrence in patients with T0-2 stage as 55%, in patients with T3-4 stage, 84%. The average time to recurrence after salvage surgery in patients with early T-stage was 14 months while in patients with advanced T-stage it was 7 months.

Complications of the surgery treatment occurred in 20–39% of cases and contended with difficulties such as healing of the surgical wound, skin necrosis, fistula, and pneumonia. Trial of Ferrier et al. shows a close relation between preoperative comorbid conditions and major complication of the surgery. Patients with American Society of Anesthesiologists (ASA) risk score 2 and more had a higher risk of postoperative complications than patients with ASA risk score 1.[11]

5. Conclusion

In this case, we want to show that despite a seemingly incurable finding it is always necessary to consider radical treatment regardless of the patient's age. Curative treatment could achieve long term remission in the group of the older patients.

Conflict of interest

None declared.

Financial disclosure

None declared.

REFERENCES

1. Lomas A, Leonardi-Bee J, Bath-Hextall F. A systematic review of worldwide incidence of nonmelanoma skin cancer. *Br J Dermatol* 2012;**166**(5):1069–80.
2. Garovich S, Colloca G, Sollena P, et al. Skin cancer epidemics in the elderly as an emerging issue in geriatric oncology. *Aging Dis* 2017;**8**(5):643–61.
3. Szturz P, Vermorken JB. Treatment of elderly patients with squamous cell carcinoma of the head and neck. *Front Oncol* 2016;**6**:199.
4. Amini A, Jones BL, McDermott JD, et al. Survival outcomes with concurrent chemoradiation for elderly patients with locally advanced head and neck cancer according to the National Cancer Data Base. *Cancer* 2016;**122**:1533–43.
5. Apisarnthanarax S, Dhruva N, Ardeshirpour F, et al. Concomitant radiotherapy and chemotherapy for high-risk nonmelanoma skin carcinomas of the head and neck. *Int J Surg Oncol* 2011;**2011**:464829.
6. VanderWalde NA, Meyer AM, Deal AM, et al. Effectiveness of chemoradiation for head and neck cancer in an older patient population. *Int J Radiat Oncol Biol Phys* 2014;**89**(30).
7. Dean NR, Sweeny L, Magnuson JS, et al. Outcomes of recurrent head and neck cutaneous squamous cell carcinoma. *J Skin Cancer* 2011:972497.
8. Al-Othman MO, Mendenhall WM, Amdur RJ. Radiotherapy alone for clinical T4 skin carcinoma of the head and neck with surgery reserved for salvage. *Am J Otolaryngol* 2001;**22**(6):387–90.
9. Goodwin WJ. Salvage surgery for patients with recurrent squamous cell carcinoma of the upper aerodigestive tract: when do the ends justify the means? *Laryngoscope* 2000;**110**(S93):1–18.
10. Kim AJ, Suh JD, Sercarz JA, et al. Salvage surgery with free flap reconstruction: factors affecting outcome after treatment of recurrent head and neck squamous carcinoma. *Laryngoscope* 2007;**117**(6):1019–23.
11. Ferrier MB, Spuesens EB, Le Cessie S, Baatenburg de Jong RJ. Comorbidity as a major risk factor for mortality and complications in head and neck surgery. *Arch Otolaryngol Head Neck Surg* 2005;**131**(1):27–32.