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Case Report
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Total Body Electron-Radiation Therapy in Mycosis Fungoides: A Case Report

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Abstract

A cutaneous T-cell-Lymphoma was progressive after six different lines of chemotherapy. For local palliation total body electron-radiation therapy was performed with a total dose of 27, 5 Gy at single doses of 1,5 Gy and 1 Gy respectively. The treatment resulted in complete remission lasting for 19 months until a cardiac related death. Therefore radiation therapy should be offered earlier in the entire treatment course in order to achieve lasting local control.

Introduction

Mycosis fungoides is predominantly treated by a combination of cytotoxic, systemic therapy with immunotherapy and photochemotherapy (PUVA). Radiation therapy as a mean of treatment therefore does not play anymore a decisive role in the treatment of cutaneous Non-Hodgkin-Lymphoma. Actually radiation therapy is mainly applied to achieve lasting local control of residual lymphoma manifestations. Therefore the knowledge has declined for the role that radiotherapy can play in cases where systemic therapies have not been proven effective.

Hence we would like to present a case of mycosis fungoides progressive after unsuccessful sixth-line systemic therapy where total body electron therapy has been performed.

Case Presentation

In 1997, in a then 52 years old male patient a cutaneous T-cell-Lymphoma stage II B had been diagnosed. In September 2006, the patients presented with an acute exacerbation of his cutaneous lymphoma.

Until April 2010 numerous systemic therapies were performed: Psoralen orally plus UV-A therapy, liposomal doxorubicin, PUVA-therapy in combination with interferon, therapy with Vorinostat, methotrexate over 3 months, 8 cycles of gemcitabine and again PUVA-therapy with Geralen and interferon [1-4].

Because local radiation therapy in March 2008 supraorbitally on the left side had produced a complete and lasting remission the patient presented again in the department of radiation oncology with the question whether radiological means of treatment could be applied in his now therapy-resistant status (Figure 1).

Discussion

Due to the unsuccessful prior therapies and increasing complaints of the patient radiation therapy was indicated as an attempt to reach palliation. The radiotherapy was performed as whole-body electron therapy with shielding of a prior implanted defibrillator, both eyes and all finger and foot nails. Treatment was done from July to September 2010 in the modified Stanford-technique with single doses of 1,5 Gy up to a total dose of 16,5 Gy.

After an interruption of 17 days due to a cardiac event treatment was continued with single doses of 1 Gy up to a cumulative, total dose of 27,5 Gy in the entire integument. Acute side effects of radiotherapy were pigmentation and erythema according RTOG grade III, alopezia of the scalp and mild weakness.

Concerning the lymphoma manifestation a nearly complete remission was to notify except in the shielded areas. The patient himself rated his general status according ECOG 0 and was nearly free of any complaints. 19 months after completion of therapy the patient died due to cardiac event

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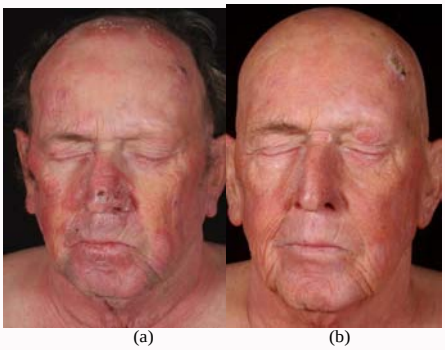
Figure 1: Extended cutaneous infiltration of T-cell-lymphoma.



(a) (b)

Figure 2: (a) Facial involvement except left periorbital region after prior radiation therapy. (b) Nearly complete remission 6 weeks after radiotherapy.

in lasting, complete remission of his cutaneous lymphoma (Figure 2a and b).

Conclusion

Whole-body electron radiation therapy proved to be a highly effective mean of treatment in chemotherapy resistant cutaneous Non-Hodgkin-Lymphoma. Acute toxicity is manageable without problems. Radiotherapy should be considered earlier in the treatment process, preferable after 3rd line chemotherapy. Radiotherapy should be actively promoted and offered to our fellow colleagues in dermatology.

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