

Primary Cutaneous T-Cell Lymphoma Treated with Electron Therapy

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Abstract

The primary cutaneous lymphomas are a group of rare malignant lesions involving the skin, representing only 2% of new cases of NHL per year; Distinct types of cutaneous T-cell lymphoma and cutaneous B-cell lymphoma can be distinguished. In the Western world, cutaneous T-cell lymphomas constitute 75% to 80% of primary cutaneous lymphomas, with mycosis fungoides the most common type, and cutaneous B-cell lymphomas 20% to 25%. Radiation therapy of primary cutaneous lymphomas requires the use of special techniques. Here, we present the case of a woman of 27 years with cutaneous T-Cell lymphoma, which was treated with electron therapy with good results.

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Clinical Case

She is a 27-year-old patient from Arandas, Jalisco, Guadalajara. Stylist profession, with no cancer history in their families, denied chronic degenerative diseases, chronic use of drugs, exposure to chemicals, tobacco, alcohol and illegal substances. Who goes to the consultation of dermatology at the IMSS (Mexican Social Security Institute) observing the following: dermatosis affecting head, face, upper and lower extremities on all sides, the back and chest, abdomen widely, described as countless not confluent regular oval limits and inaccurate measuring hypochromic macules, the lower most 1 cm and 7 cm in diameter, with the presence of some erythematous plaques with lichenified surface, the presence of fine scaling, some hematic crusts (**Figures 1 and 2**).

Biopsy "punch" is performed, which reports: Epidermis with hyperkeratosis, parakeratosis, acanthosis, microabscesses Pautrier, consisting of atypical lymphocytes, which have scant cytoplasm, pleomorphic, hyperchromatic chromatin lumps in thick and thin core. The entire dermis same population sample of atypical lymphocytes, which extend to the hair follicle, the hair erector muscle attachments, and perineural and perivascular fragment. The result of Immunohistochemistry: CD30 + in prevalence, and CD20 + minority in companion cells, concluding histopathological diagnosis: primary cutaneous lymphoma of T-cell phase plates.

Treatment was initiated with a total irradiation of skin therapy electron (LINAC with energy of 6 MeV, at a depth of 1.2 cm skin)

placing the patient 3m electron source, with total dose of 27 Gy 15 fractions, prior informed consent.

She continued close monitoring, documenting complete response 3 months after the end of treatment (**Figure 3**).

Discussion

Primary cutaneous lymphomas (LCP) are a heterogeneous group of lymphoid neoplasms that originate primarily in the skin. Most (70%) are T-cell lymphomas and only 30% originating from B lymphocytes is important to differentiate their ganglion LCP equivalent, since they have clinical, histopathological, different immunophenotypic and molecular biology, have a more indolent course in the majority of cases and different treatment regimens are used [1-3].

For a proper diagnosis and treatment, then you should be familiar with the current classification proposed by groups such as the European Organization for Research and Treatment of Cancer (EORTC) / World Health Organization (WHO) (**Table 1**).

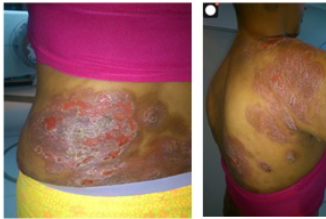


Figure 1 Lesions in dorsal region, lumbar region with irregular edges, large, corresponding to phase plates in primary cutaneous T-cell lymphoma..



Figure 2 Plantar and dorsal lesion in the right foot, skin lesions characteristic of cutaneous lymphoma.

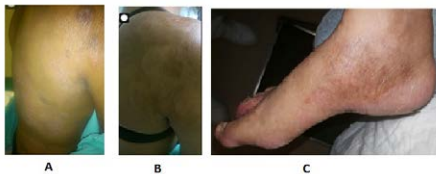


Figure 3 Areas with hyperchromia seen as traces of previously existing lesions. No peeling, no edema.

Table 1 WHO classification of lymphomas EORTC-PRIMARY.

Mycosis fungoides and variants
Sézary Syndrome
primary cutaneous anaplastic large-cell lymphoma
subcutaneous panniculitis-like T-cell lymphoma
primary cutaneous NK/T-cell lymphoma
Nasal type
primary cutaneous g-d T-cell lymphoma

The primary cutaneous lymphomas, have low incidence, with good overall and disease-free survival. Because of the rarity of the entity, the clinical course that is often confused most patients present with skin lesions greater than or equal to 5 years before being diagnosed period [3,4].

Conclusions

Electron therapy in the treatment of primary cutaneous T-cells, is successfully useful in most cases due to the radiosensitivity of these cells, particularly in cases of mycosis fungoides and stage of early tumors, in pagetoid reticulosis, lymphomas large cell, and pleomorphic T-cell lymphoma.

But because of the extensive toxicity it is considered limited treatment, whose manifestations include bone marrow suppression, radiation dermatitis, xerosis, edema, alopecia, loss of nails and future development of second malignancies, which precludes their use in combined modalities. Therefore RT with electrons is not recommended for the erythrodermic CTCL (T3) by the increased risk of severe scaling [1,5-8].

Currently, the goal in treating PCL is to prevent progression to more advanced stages of the disease, there is no curative treatment available and there is also no studies comparing different treatment and local control rates and recurrence-free survival therefore treatment of these patients is not completely notarized. The aim is to reduce the patient's symptoms [1,3,4,6,7,9,10].

References

- 1 Izu-Belloso RM, García-Ruiz JC (2012) Treatment of Cutaneous Lymphomas: an Update. *Actas Dermosifiliogr* 103: 694-707.
- 2 Swerdlow SH, Campo E, Harris NL (2008) WHO Classification of Tumours of Haematopoietic and Lymphoid Tissues. Lyon: International Agency for Research on Cancer.
- 3 Willemze R, Jaffe ES, Burg G (2005) WHO-EORTC classification for cutaneous lymphomas. *Blood* 105: 3768-3785.
- 4 Specht L, Dabaja B, Illidge T, Wilson LD, Hoppe RT (2015) International Lymphoma Radiation Oncology Group. Modern radiation therapy for primary cutaneous lymphomas: field and dose guidelines from the International Lymphoma Radiation Oncology Group. *Int J Radiat Oncol Biol Phys* 92: 32-39.
- 5 Jaffe ES (2009) The 2008 WHO classification of lymphomas: implications for clinical practice and translational research. *Hematology Am Soc Hematol Educ Program* 523-531.
- 6 Neelis KJ, Schimmel EC, Vermeer MH, Senff NJ, Willemze R, et al. (2009) Low-dose palliative radiotherapy for cutaneous B- and T-cell lymphomas. *Int J Radiat Oncol Biol Phys* 74: 154-158.
- 7 Eich HT, Eich D, Micke O (2003) Long-term efficacy, curative potential, and prognostic factors of radiotherapy in primary cutaneous B-cell lymphoma. *Int J Radiat Oncol Biol Phys* 55: 899-906.
- 8 Hoppe RT, Cox RS, Fuks Z, Price NM (1979) Electron-beam therapy for mycosis fungoides: the Stanford University experience. *Cancer Treat Rep* 63: 691-700.
- 9 Il'in NV, Korytova LI, Leenman EE, Vinogradova IuN, Nikolaeva EN, et al. (2013) Experience of local radiation therapy and total irradiation of the skin by electron beam in patients with primary B and T-cell lymphomas of the skin. *Vopr Onkol* 59: 109-113.
- 10 Heumann TR, Esiashvili N, Parker S, Switchenko JM, Dhabbaan A, et al. (2015) Total skin electron therapy for cutaneous T-cell lymphoma using a modern dual-field rotational technique. *Int J Radiat Oncol Biol Phys* 92: 183-191.