Extracorporeal photopheresis during the COVID-19 pandemic: experience in Argentina

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Submission-ID 48

INTRODUCTION:

Patients with primary cutaneous lymphoma receive immunosuppressive therapy for long term disease control. Both cutaneous lymphoma and immunosuppressive treatment may contribute to the development of more severe COVID-19 complications.
The real challenge during the COVID-19 pandemic remains in the management of the advanced and aggressive forms of cutaneous lymphomas, including late-stage mycosis fungoides (MF) and Sézary syndrome (SS). Extracorporeal photopheresis (ECP) is one of those treatments. ECP is considered high risk therapy according to the United States Cutaneous Lymphoma Consortium recommendations for treatment of cutaneous lymphomas during the COVID-19 pandemic because it may require travel to the hospital.

METHODS:

In this cross-sectional retrospective study, data of patients with MF or SS who received ECP treatment were collected.

In our group we did not carry out prophylactic interruption of the therapy, once started. In patients with stable disease (SD) or partial response (PR) during the study period, ECP was administered every 4 weeks, until a 6-week maximum interval was reached and response maintained . The frequency of treatments was decreased, especially for patients with severe comorbidities and/or older age. The associated therapy was considered individually, depending on the extension of the disease, comorbidities, and adverse effects of each agent.

	Sézary syndrome (n: 9)	Mycosis fungoides (n: 7)
Female, number (%)	6 (59)	3(45)
Age – years, median ± IQR	63 (52 - 69)	63 (57-67)
Stage TNMB, number (%)	IVA1 8 (94), IVA2 1 (6)	IB 3 (45) , IIB 1 (10) , IIIA 3 (45)
Previous treatments, median ± IQR	2 (1-4)	1(1 - 4)
Adjunctive therapy, median ± IQR	3 (1-5)	2 (1-3)
ECP no. session, median ± IQR	20(8-50)	18 (10-60)
Deceased, number (%)	2 (25)	0
Patients infected with COVID 19, number (%)	3 (35)	0

Table 1. Data collected at the Hospital Italiano, from March 2019 to March 31st 2021 (n:16). Categorical data expressed with absolute numbers and percentages. Numerical data expressed in median and Interquartile range.

RESULTS:

16 patients with cutaneous lymphoma received ECP (9 (56%) with SS and 7 (44%) with MF). Their median age at diagnosis was 63 (57-67) years. The median number of treatments before ECP was 2 (1-3), which was typically either phototherapy or systemic corticosteroids. Regarding the associated treatment during ECP and pandemic, INF and retinoids were the first choice treatments.

In the MF group 3 patients (2 PR and 1 relapse) required additional therapy with acitretin and topic corticosteroids.

In the SS group 5 patients (1 PR, 3 progresive disease and 1 relapse) received concomitant treatment with INF alfa 2 b, bexarotene and electron beam; the relapsed patient underwent mono chemotherapy.

Three patients were infected with SARS-CoV-2, all of them were from the SS group, the contagion was outside the hospital environment. Two of the patients who developed COVID infection died.

CONCLUSION:

For patients with advanced and more aggressive forms of CTCL, who usually have multiple risk factors for a severe course of SARS-CoV-2 infection (older age, immunosuppression, multiple comorbidities, etc), therapy should aim to stabilize lymphoma with minimizing risks associated with the treatment.

The critical patient subset includes those with advanced disease, who require treatment with polychemotherapy, ECP and checkpoint inhibitors. Treatment decisions should be made on an individual basis. In our experience, the continuous use of ECP during the pandemic did not increase the risk of contagion.

BIBLIOGRAPHY: 1. Zic JA, Ai W, Akilov OE, Carter JB, Duvic M, Foss F, et al. United States Cutaneous Lymphoma Consortium recommendations for treatment of cutaneous lymphomas during the COVID-19 pandemic. J Am Acad Dermatol. 2020;83: 703–704. **2.** Phelan AL, Katz R, Gostin LO. The Novel Coronavirus Originating in Wuhan, China. JAMA. 2020. p. 709. doi:10.1001/jama.2020.1097 **3.** Liang W, Guan W, Chen R, Wang W, Li J, Xu K, et al. Cancer patients in SARS-CoV-2 infection: a nationwide analysis in China. The Lancet Oncology. 2020. pp. 335–337. doi:10.1016/s1470-2045(20)30096-6 **4.** Mateeva V, Patsatsi A. Management of primary cutaneous lymphomas during the COVID-19 pandemic. Clinics in Dermatology. 2021. pp. 64–75. doi:10.1016/j.clindermatol.2020.12.014