COMPASSIONATE USE OF PLITIDEPSIN IN PATIENTS WITH NON-HODGKIN LYMPHOMA (NHL) AND SARS-COV-2 INFECTION.

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INTRODUCTION

Plitidepsin exerts its antitumor and antiviral properties by inhibiting host cell elongation factor -1-alpha (eEF1A) and, thus, the translation of viral proteins (Papapanou M et al., 2021).

A clinical trial to evaluate plitidepsin as a treatment for Sars-Cov-2 infection in immunocompromised patients is ongoing (NCT05705167).

AIM

To describe the clinical characteristics and evolution of patients diagnosed with NHL admitted for SARS-CoV-2 infection and treated with plitidepsin.

METHODS

Observational study of NHL patients hospitalized in our center for SARS-CoV-2 between 1/07/2022 and 31/04/2023 and treated with plitidepsin 2.5 mg QD for three days as compassionate use under AEMPS authorization.

RESULTS

During the aforementioned period, there were 47 hematological patients admitted for SARS-CoV-2 infection.
Plitidepsin was administered in 5 patients with NHL who had exhausted other therapeutic options against SARS-CoV-2 and presented unfavorable evolution.

- Sixty percent (3/5) had received 6 cycles of obinutuzumab and bendamustine (the last dose in patients 1 and 2 were administered < 6 months prior to admission for SARS-CoV-2 and in patient 5, the last dose was administered > 2 years prior to admission).
- Patients 2 and 5 had received rituximab maintenance, the last dose being administered in both < 2 months prior to admission for SARS-CoV-2.
- Patient 4 had received 6 cycles of obinutuzumab-COMP and maintenance with obinutuzumab, with the last dose administered 9 months before admission for SARS-CoV-2.
- Patient 3 has a synchronous diagnosis of mantle lymphoma and SARS-CoV-2 infection.
- Patients were all vaccinated against SARS-CoV-2 and received at least two antiviral treatments prior to plitidepsin.
- Before receiving plitidepsin, two patients required admission to the ICU for invasive ventilation, one of which patients died during ICU stay due to SARS-CoV-2 progression.

Safety:

- No adverse events related to plitidepsin were observed.

Effectiveness:

- After treatment, all patients had negative CRP.

	PATIENT 1	PATIENT 2	PATIENT 3	PATIENT 4	PATIENT 5
Gender	Woman	Woman	Man	Man	Woman
Age	50	47	91	67	66
NHL type	Follicular Lymphoma	Follicular Lymphoma	Mantle cell Lymphoma	Follicular Lymphoma	Follicular Lymphoma
Treatment	Obinutuzumab-Bendamustine	Obinutuzumab-Bendamustine	-	Obinutuzumab-COMP	Obinutuzumab-Bendamustine
Last dose	19/01/22	17/01/22	-	09/03/20	14/12/20
Maintenance	No	Rituximab	-	Obinutuzumab	Rituximab
Maintenance last dose	No	05/04/22	-	07/03/22	05/02/23
Vaccination status (in number of doses)	3	3	4	4	3
1st CRP SARS-COV-2 positive	03/03/22	18/05/2022	19/01/23	08/12/23	03/03/23
Plitidepsin administration day	07/07/22	26/07/22	07/02/23	19/01/23	27/03/23

Table 1: *Baseline characteristics of the patients.*

	PATIENT 1	PATIENT 2	PATIENT 3	PATIENT 4	PATIENT 5
Adverse effects to plitidepsin	No	No	No	No	No
Need of oxygen therapy escalation after plitidepsin	No	No	No	No	No
Opportunistic infections	No	No	No	No	No
Thromboembolic events	No	No	No	No	No
ICU discharge day	-	-	-	31/01/23	-
Need for anti SARS-COV-2 treatment after plitidepsin	2nd cycle of plitidepsin	Remdesivir	-	No	-
Exitus	No	No	No	No	Yes
NHL status	Remission	Relapse 01/23. 2nd line.	Remission	Remission	-

Table 2: *Evolution and complications*

CONCLUSIONS

Plitidepsin shows a good safety profile in patients with NHL and SARS-CoV-2 infection. Prospective studies are needed to confirm the effectiveness of plitidepsin as a treatment for SARS-CoV-2 infection in patients with NHL who have received immunochemotherapy.

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