Poster
TCL-456

Real-World Use of Mogamulizumab among Patients with Mycosis Fungoides and Sézary Syndrome Before and During COVID-19 in the United States

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Introduction

- Cutaneous T cell lymphomas (CTCL) are a rare, heterogenous group of non-Hodgkin lymphomas
  - Mycosis fungoides (MF) and its leukemic variant Sézary syndrome (SS) - when viewed together - are the most common subtypes of CTCL, comprising approximately 70% of cases [1,2]
- Mogamulizumab (Moga), a new systemic therapy for CTCL, received approval in 2018
  - The product label specifies that Moga be administered on days 1, 8, 15, and 22 of the first 28-day cycle (loading) and on days 1 and 15 of each subsequent cycle (maintenance) for adult patients with relapsed or refractory MF or SS after ≥1 prior systemic therapy
  - The COVID-19 pandemic, which prompted shelter in place orders and state-wide shut-downs in March 2020, had a substantial impact on healthcare systems and patient access
  - To increase patient safety during the COVID-19 pandemic, the National Comprehensive Cancer Network suggested dosing intervals for systemic cancer therapies be extended to limit in-person visits [3]
- It remains unknown, however, if the dosing intervals of Moga were impacted during the COVID-19 pandemic as compared to before the COVID-19 pandemic

Objectives

- To examine the real-world use of Moga before and during the COVID-19 pandemic in the United States (US)

Methods

Data Source

- This study used de-identified patient-level data from Symphony Health Solutions' Integrated Dataverse database (SHS), a longitudinal patient data source that tracks 274 million active patients in the US
  - SHS data are integrated from medical practices, pharmacies, and hospitals to longitudinally assess healthcare delivery and patient usage patterns
  - Data are representative of the US population in terms of age, sex, geography, and insurance coverage
- Medical, prescription, and hospital claims data were linked through de-identified patient codes

Population

- Adult patients with ≥1 diagnosis code for MF or SS (ICD-10 CM: C84.0x or C84.1x) and ≥1 Moga claim during the study period
- Two patient groups from the selected population:
  - MF (no SS diagnosis) SS (any SS diagnosis)

Period of Interest

- Overall study period: 10/01/2018 to 05/06/2021
  - Pre COVID-19: 10/01/2018 to 03/31/2020
  - COVID-19: 04/01/2020 to 05/06/2021

Variables

- Patient demographics (i.e., age, sex)
- Dosing intervals (i.e., days between doses) for each treatment phase
  - Loading: doses 1-4
  - Transition: doses 4-5
  - Maintenance: doses 6+

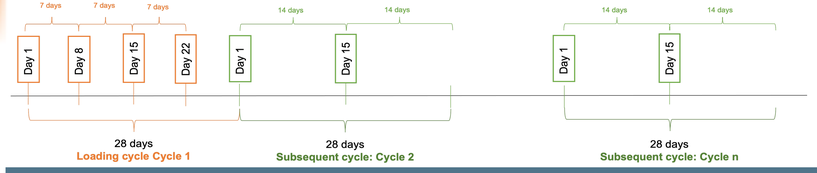
Analyses

- Results were reported separately for MF and SS patients
- Descriptive statistics were reported for the patient characteristics and dosing intervals overall, and by subgroup (pre COVID-19 and COVID-19)

Results

- Overall, 154 MF patients and 204 SS patients initiated Moga during the study period
  - Among MF patients, 98 and 56 patients were in the pre COVID-19 and COVID-19 subgroups, respectively
  - Among SS patients, 121 and 83 patients were in the pre COVID-19 and COVID-19 subgroups, respectively

Figure 1. Mogamulizumab Dosing Frequency



Per product label:
1 mg/kg as an intravenous infusion over at least 60 minutes on days 1, 8, 15, and 22 of the first 28-day cycle (loading) and on days 1 and 15 of each subsequent cycle (maintenance)

References

1. Dobos G, et al. Epidemiology of cutaneous T-cell lymphomas: A systematic review and meta-analysis of 16,953 patients. *Cancers (Basel)*. 2020; 12(10), 2921.
2. Imam MH, et al. Incidence and survival patterns of cutaneous T-cell lymphomas in the United States. *Leuk Lymphoma*. 2013; 54(4): 752–759.
3. Cinar P, et al. Safety at the time of the COVID-19 pandemic: How to keep our oncology patients and healthcare workers safe. *JNCCN*. 2020; 18(5): 504-509.

Results

Table 1. Patient characteristics and dosing intervals for MF and SS patients, overall and by subgroup

	Overall	Pre COVID-19	COVID-19
MF Patients	**N = 154**	**N = 98**	**N = 56**
Age, mean ± SD	66.8 ± 12.8	67.2 ± 12.6	66.0 ± 13.2
Male sex, n (%)	98 (63.6)	64 (65.3)	34 (60.7)
Dosing interval during loading (days), mean ± SD*	11.7 ± 21.8	13.2 ± 27.1	9.1 ± 7.6
Patients with ≤10 days between loading doses, n (%)*	89 (61.8)	50 (56.8)	39 (69.6)
Patients with 11-14 days between loading doses, n (%)*	30 (20.8)	21 (23.9)	9 (16.1)
Patients with >14 days between loading doses, n (%)*	25 (17.4)	17 (19.3)	8 (14.3)
Dosing interval during transition (days), mean ± SD†	10.5 ± 6.5	11.7 ± 7.6	8.3 ± 2.7
Patients with ≤10 days between dose 4 and 5, n (%)†	67 (60.9)	35 (48.6)	32 (84.2)
Patients with 11-14 days between dose 4 and 5, n (%)†	36 (32.7)	31 (43.1)	5 (13.2)
Patients with >14 days between dose 4 and 5, n (%)†	7 (6.4)	6 (8.3)	1 (2.6)
Dosing interval during maintenance (days), mean ± SD‡	15.8 ± 14.8	16.1 ± 16.4	15.2 ± 8.1
Patients with ≤21 days between maintenance doses, n (%)‡	62 (66.7)	38 (62.3)	24 (75.0)
Patients with 22-28 days between maintenance doses, n (%)‡	14 (15.1)	11 (18.0)	3 (9.4)
Patients with >28 days between maintenance doses, n (%)‡	17 (18.3)	12 (19.7)	5 (15.6)
SS Patients	**N = 204**	**N = 121**	**N = 83**
Age, mean ± SD	69.2 ± 11.0	69.0 ± 10.3	69.6 ± 12.1
Male sex, n (%)	112 (54.9)	63 (52.1)	49 (59.0)
Dosing interval during loading (days), mean ± SD*	10.2 ± 7.6	11.1 ± 8.7	9.0 ± 5.5
Patients with ≤10 days between loading doses, n (%)*	115 (59.3)	62 (53.9)	53 (67.1)
Patients with 11-14 days between loading doses, n (%)*	43 (22.2)	31 (27.0)	12 (15.2)
Patients with >14 days between loading doses, n (%)*	36 (18.6)	22 (19.1)	14 (17.7)
Dosing interval during transition (days), mean ± SD†	15.5 ± 32.9	17.7 ± 41.0	11.7 ± 7.9
Patients with ≤10 days between dose 4 and 5, n (%)†	85 (52.1)	51 (50.0)	34 (55.7)
Patients with 11-14 days between dose 4 and 5, n (%)†	54 (33.1)	36 (35.3)	18 (29.5)
Patients with >14 days between dose 4 and 5, n (%)†	24 (14.7)	15 (14.7)	9 (14.8)
Dosing interval during maintenance (days), mean ± SD‡	16.5 ± 17.2	16.8 ± 18.9	15.0 ± 5.1
Patients with ≤21 days between maintenance doses, n (%)‡	85 (54.8)	40 (40.8)	45 (78.9)
Patients with 22-28 days between maintenance doses, n (%)‡	24 (15.5)	19 (19.4)	5 (8.8)
Patients with >28 days between maintenance doses, n (%)‡	46 (29.7)	39 (39.8)	7 (12.3)

*Calculated among patients with >1 Moga claims. †Calculated among patients with >4 Moga claims. ‡Calculated among patients with >5 Moga claims. MF: Mycosis fungoides; SD: standard deviation; SS: Sézary syndrome.

Limitations

- Patients with MF and SS were identified using diagnosis codes, which may result in misclassification due to coding error and patients may not be identified due to incomplete diagnosis capture in the database
- Information on disease severity was not available in SHS
- Study results from this analysis may not be generalizable to a population with different insurance coverage or patient characteristics (i.e., age, sex)

Conclusions

- During the study period, there was a higher number of SS patients who initiated Moga as compared to MF patients in the SHS database
- Among MF and SS patients, dosing intervals for Moga in the loading and transition phases were not extended during the 1st year of the pandemic compared to pre COVID-19
- There was a trend towards closer concordance with the product label specifications during COVID-19

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