Mogamulizumab-associated Rash in Patients with Mycosis Fungoides and Sézary Syndrome

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INTRODUCTION

- Mycosis fungoides (MF) and its leukemic variant Sézary syndrome (SS) are the most common forms of cutaneous T-cell lymphoma (CTCL)
- Approved for use in CTCL in 2018, mogamulizumab (mogam) is a monoclonal antibody directed against chemokine receptor CCR4, a marker overexpressed on malignant T-cells
- In its registration study, mogam-associated rash (MAR) was seen in 24% of patients and was usually reversible with holding the medication
- As a large referral center for CTCL, we noticed MAR occurring in our clinical practice more frequently than previously reported and sought to describe MAR in the real-world setting

METHODS

- We performed a retrospective review of all patients with CTCL treated consecutively with mogam as standard of care at WashU from 2018-2022
- To be included, patients required a diagnosis of MF or SS and must have received ≥1 dose of mogam
- Our objectives were to better characterize the features of rash emergence, duration of rash, and response to treatments for MAR
- Data was collected with regards to stage, blood involvement, mogam dosing, development of biopsy confirmed rash, treatments for MAR and their responses
- This study was IRB approved at WUSTL

RESULTS

- A total of 20 CTCL pts who received ≥1 dose of mogam were identified

Baseline Patient Characteristics	N = 20
CTCL subtype: Mycosis fungoides Sézary syndrome	 7 (35%) 13 (65%)
Age, median	69 (range, 42-78)
Male sex	9 (45%)
Prior systemic therapies, median	1 (range, 0-15)

Development of MAR

- Twelve of 20 (60%) pts who received mogam developed biopsy-confirmed MAR
- All pts developed MAR while being dosed at the standard dosing interval

Patients with MAR	N = 12
Number of doses prior to MAR onset, median	10.5 (range, 5-22)
Months prior to MAR onset, median	4 (range, 1-10)
MAR led to treatment discontinuation	10 (83%)
Rash duration, median	43 weeks (range, 4-138)

Representative images of MAR at onset



Treatment of MAR

- Strategies employed to treat MAR *other than* temporarily holding mogam, as well as response rates to specific treatments are described in the table below

Strategies used to treat MAR	N = 12	Clinical improvement with treatment
Decreasing mogam frequency	4	4/4*
Topical steroids	10	4/10
Short-course prednisone	5	4/5
Oral methotrexate	3	1/3
Oral bexarotene	4	2/4
Phototherapy	1	1/1
Oral cyclophosphamide	1	1/1
JAK2 inhibitor	1	1/1

*may have been confounded by concurrent use of other therapies

Response to Mogam

- Five of 12 pts who developed MAR were retreated later and all 5 patients re-developed MAR
- Of the 6 people who achieved global CR, 4 have sustained a CR without any subsequent treatment at median follow up of 2.1 (range, 1.3-2.9) years

CTCL Response to Mogam	N	# with MAR of responders
Overall response rate	15/20 (75%)	12/15 (80%)
Global complete response	6/20 (30%)	5/6 (83%)
Sustained global CR at 2.1 years	4/6 (67%)	3/4 (75%)
Patients with baseline blood involvement (B1/B2) who achieved CR	9/13 (69%)	7/9 (77%)

CONCLUSIONS

- In this analysis we describe currently available data on mogam-associated rash to better inform the development of future studies in MAR.
- The frequency and persistence of MAR in clinical practice appears greater than previously described in the initial studies leading to mogam approval.
- The optimal management of MAR remains unknown as the pathogenesis has not yet been elucidated.
- Given the high efficacy and response durability to mogam, determining the etiology of the rash is critical in understanding management of patients treated with mogam in this already difficult to treat patient population.
- Further multi-institutional studies to understand the pathogenesis of MAR are planned.

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Relevant COI: NMS and AM both have served as consultants for Kyowa Kirin

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