Systemic Treatments in Moderate-to-Severe Atopic Dermatitis in Pediatric Patients up to 12 Years of Age: Real-World Treatment Outcomes from the PEDISTAD Registry

Running Header: Systemic Treatments in Pediatric Patients with Atopic Dermatitis: Real-World Treatment Outcomes

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Supplemental Table S1 Treatment duration in months

Months	**Dupilumab (*N* = 214)**	**Methotrexate (*N* = 135)**	**Cyclosporine (*N* = 144)**
Minimum	0	0	0
Q1	11.6	7.5	4.7
Mean (SD)	16.9 (8.9)	18.9 (12.5)	14.5 (11.9)
Median	16.1	17.3	10.4
Q3	21.9	31.6	23.1
Maximum	43.5	42	39

SD standard deviation, *Q* quartile.

Supplemental Table S2 Number of patients treated with concomitant treatments

	Dupilumab (*N* = 184)	**Methotrexate (*N* = 84)**	**Cyclosporine (*N* = 118)**
Concomitant treatment, *n* (%)			
Topical AD medications			
TCS	94 (51.1)	45 (53.6)	80 (67.8)
TCI	47 (25.5)	27 (32.1)	46 (39.0)
Emollients	53 (28.8)	34 (40.5)	55 (46.6)
Crisaborole (PDE-4 inhibitor)	3 (1.6)	1 (1.2)	1 (0.8)
Topical antibiotics	17 (9.2)	6 (7.1)	7 (5.9)
Systemic AD medications			
Systemic corticosteroids	29 (15.8)	17 (20.2)	30 (25.4)
Azathioprine	2 (1.1)	3 (3.6)	5 (4.2)
Mycophenolate	4 (2.2)	2 (2.4)	4 (3.4)
Other non-systemic therapy	27 (14.7)	12 (14.3)	29 (24.6)
UV phototherapy	2 (1.1)	2 (2.4)	5 (4.2)

AD atopic dermatitis, *PDE* phosphodiesterase, *TCI* topical calcineurin inhibitor, *TCS* topical corticosteroid, *UV* ultraviolet.

Supplemental Table S3 Reasons for discontinuation reported in ≥ 3 patients

Dupilumab (*N* = 214)		**Methotrexate (*N* = 135)**		**Cyclosporine (*N* = 144)**	
Reason for discontinuation	*n* (%)	**Reason for discontinuation**	*n* (%)	**Reason for discontinuation**	*n* (%)
Adverse event	4 (1.9)	Lack of efficacy	12 (9.2)	Lack of efficacy	19 (13.4)
Lack of efficacy	4 (1.9)	Caregiver/patient decision	9 (6.9)	Disease well-controlled	16 (11.3)
Disease well-controlled	3 (1.4)	Disease well-controlled	8 (6.2)	Caregiver/patient decision	10 (7.0)
Other[A]	6 (2.8)	Adverse events	3 (2.3)	Adverse event	6 (4.2)
Puncture fear/needle phobia	3 (1.4)	Other[B]	7 (5.4)	Concomitant medication	6 (4.2)
Changed treatment	1 (0.5)	Doctor decision	2 (1.5)	Low compliance	3 (2.1)
Dosing changed	1 (0.5)	Changed treatment	1 (0.8)	Other[C]	11 (7.7)
Improvement in AD signs and symptoms and economic burden	1 (0.5)	Immunosuppression concern	1 (0.8)	Doctor decision	3 (2.1)
		Improvement in AD signs and symptoms	1 (0.8)	Changed treatment	2 (1.4)
		1 year of treatment completed	1 (0.8)	Improvement in AD signs and symptoms	2 (1.4)
		Uncontrolled disease	1 (0.8)	Unknown	2 (1.4)
				Parents decision	1 (0.7)

Dupilumab (*N* = 214)	Methotrexate (*N* = 135)	Cyclosporine (*N* = 144)	
		Regimen end	1 (0.7)

[A]Reasons defined as other for patients receiving dupilumab: Puncture fear/needle phobia (n [%]): puncture fear, (1 [0.47]); Afraid of injections, but wants to start again, (1 [0.47]); Patient has needle phobia/anxiety, (1 [0.47]). Changed treatment (n [%]): moved to 200 mg of systemic corticosteroids q2w per body weight recommendation. Change in dose (n [%]): starter dose only; dosing for maintenance dose is not the same (1 [0.47]). [B]Reasons defined as other for patients receiving methotrexate: Doctor decision, (n [%]): doctor decision, (1 [0.8])]; physician decision, (1 [0.8]). Immunosuppression concern, (n [%]): discontinued due to concerns of immunosuppression during COVID-19 pandemic, (1 [0.8]). Treatment changed, (n [%]): the patient was able to start Dupilumab, provided by Freedom Support Program. The study patient started this new systemic treatment for AD on Jul 8, 2021 and his visit at SickKids was on Jul 29, 2021, (1 [0.8]). Immunosuppression concern: discontinued due to concerns of immunosuppression during COVID-19 pandemic, (1 [0.8]). [C]Reasons defined as other for patients receiving cyclosporine: Doctor decision, (n [%]): as per medical indication, (1 [0.7]); doctor prescribed, (1 [0.7]), reduction per physician protocol, (1 [0.7]). Changed treatment, (n [%]): patient was starting dupilumab, (1 [0.7]); switched therapy, (1 [0.7]). Improvement in AD signs and symptoms, (n [%]): disease control, (1 [0.7]); “the patient is getting better and does not need to take his medication, (1 [0.7]). Parent decision, (n [%]): Mother’s decision, (1 [0.7]).