

Treatment Patterns and Perceptions of Treatment Options in Japanese

Pediatric and Adolescent Patients with Atopic Dermatitis - Supplementary

Akio Tanaka,¹ Yumi Kang,^{2*} Junichi Danjo,² Takashi Matsuo,² Hito Torisu-Itakura,² Simran Marwaha,³ Peter Anderson,³ James Piercy,³ Atushi Otsuka⁴

¹Department of Dermatology, Graduate School of Biomedical Sciences, Hiroshima University, Hiroshima, Japan

²Eli Lilly Japan K.K., Hyogo, Japan

³Adelphi group, Bankside 3 90-100 Southwark St, London SE1 0SW, United Kingdom

⁴Department of Dermatology, Kindai University Hospital

Corresponding Author:

Junichi Danjo, M.D., Ph. D., Director Japan Drug Development and Medical Affairs

Eli Lilly Japan K.K.,

Kobe, Japan

Phone: +81-(0)80-5499-0344

Email: junichi.danjo@lilly.com

Word count: 3671

Table count: 5

Figure count: 2

Supplementary Figure count: 0

Supplementary Table count: 1

Conflict of interest: A.T. has served as a speaker/consultant and for Maruho, Torii Pharma, Sanofi, Otsuka Pharma, Eli Lilly, Pfizer, and Abbie and has a research grant contract with Maruho. Y.K., J.D., T.M., H.T. are full-time employees and stakeholders of Eli Lilly and Company. S.M., P.A., J.P. are full-time employees of Adelphi Group has a vendor contract with Eli Lilly. A.O. has served as a speaker for Novartis, Sanofi, Eli Lilly, AbbVie, Janssen Pharmaceutical K.K. and Maruho.

Running Head/Title: Treatment of Pediatric Atopic Dermatitis in Japan

Supplementary table 1: Demographics and clinical characteristics stratified by treatment group prescribed at data collection.

	Treatment prescribed at data collection			
	Overall (n=537)	Biologic (n=63)	Oral JAK-i (n=39)	No Biologic or Oral JAK-i (n=436)
Patient age, years	n=537	n=63	n=39	n=436
Mean ± SD	12.6 ± 4.2	15.9 ± 0.9	14.9 ± 1.4	12.0 ± 4.4
Patient age groups, n (%)	n=537	n=63	n=39	n=436
0–1 years	16 (3.0)	1 (1.6)	0 (0.0)	15 (3.4)
2–5 years	38 (7.1)	0 (0)	0 (0.0)	38 (8.7)
6–11 years	110 (20.5)	0 (0)	1 (2.6)	109 (25.0)
12–14 years	126 (23.5)	2 (3.2)	13 (33.3)	110 (25.2)
15–17 years	247 (46.0)	60 (95.2)	25 (64.1)	164 (37.6)
Patient sex, n (%)	n=537	n=63	n=39	n=436
Male	340 (63.3)	44 (69.8)	23 (59.0)	273 (62.6)
Female	197 (36.7)	19 (30.2)	16 (41.0)	163 (37.4)
Concomitant conditions, n (%)	n=536	n=63	n=39	n=435
Food allergies	44 (8.2)	3 (4.8)	1 (2.6)	39 (9.0)
Asthma	72 (13.4)	13 (20.6)	5 (12.8)	55 (12.6)
Allergic rhinitis	129 (24.1)	24 (38.1)	9 (23.1)	98 (22.5)

None of the above	284 (53.0)	24 (38.1)	25 (64.1)	236 (54.3)
Time since diagnosis, years	n=244	n=36	n=24	n=185
Mean ± SD	4.2 ± 4.6	5.3 ± 5.5	5.1 ± 5.2	3.8 ± 4.3
Areas of body affected, n (%)	n=537	n=63	n=39	n=436
Head and neck	377 (70.2)	58 (92.1)	36 (92.3)	285 (65.4)
Upper limbs	447 (83.2)	56 (88.9)	37 (94.9)	355 (81.4)
Trunk	407 (75.8)	57 (90.5)	35 (89.7)	316 (72.5)
Lower limbs	390 (72.6)	56 (88.9)	34 (87.2)	301 (69.0)
None of these	12 (2.2)	0 (0)	0 (0.0)	12 (2.8)
EASI score	n=349	n=51	n=34	n=265
Mean ± SD	16.1 ± 12.3	24.8 ± 13.8	22.2 ± 12.7	13.8 ± 11.1
BSA at survey, %	n=431	n=57	n=37	n=338
Mean ± SD	22.6 ± 18.5	32.5 ± 21.0	28.8 ± 18.2	20.4 ± 17.5
Type of AD, n (%)	n=537	n=63	n=39	n=436
Chronic AD	421 (78.4)	59 (93.7)	37 (94.9)	326 (74.8)
Seasonal AD	116 (21.6)	21 (33.3)	9 (23.1)	87 (20.0)
Severity of AD at data collection, n (%)	n=537	n=63	n=39	n=436

Mild	105 (19.6)	4 (6.3)	7 (17.9)	94 (21.6)
Moderate	247 (46.0)	23 (36.5)	13 (33.3)	210 (48.2)
Severe	185 (34.5)	36 (57.1)	19 (48.7)	132 (30.3)
Severity of AD at initiation of treatment, n (%)	n=480	n=62	n=39	n=380
Mild	51 (10.6)	2 (3.2)	0 (0.0)	49 (12.9)
Moderate	260 (54.2)	24 (38.7)	13 (33.3)	223 (58.7)
Severe	169 (35.2)	36 (58.1)	26 (66.7)	108 (28.4)
Time since current treatment initiation, months	n=373	n=59	n=36	n=280
Mean ± SD	13.0 ± 20.8	9.1 ± 10.3	5.4 ± 9.3	15.4 ± 23.1
Current disease progression, n (%)	n=537	n=63	n=39	n=436
Improving rapidly	28 (5.2)	3 (4.8)	1 (2.6)	24 (5.5)
Improving slowly	225 (41.9)	34 (54)	16 (41.0)	174 (39.9)
No change/stable	190 (35.4)	8 (12.7)	13 (33.3)	169 (38.8)
Deteriorating slowly	74 (13.8)	16 (25.4)	6 (15.4)	54 (12.4)
Deteriorating rapidly	20 (3.7)	2 (3.2)	3 (7.7)	15 (3.4)

Abbreviations: AD, atopic dermatitis; BSA, body surface area; EASI, Eczema Area and Severity Index; JAK-I, Janus kinase inhibitor; SD, standard deviation. Biologic and oral JAK-i groups were not mutually exclusive and patients could appear in both if they were reported to be receiving both treatments.

Supplementary table 2: Demographics and clinical characteristics stratified by PSC completion status.

		PSC completion status	
	Overall (n=537)	PSC Completed (n=111)	No PSC Completed (n=426)
Patient age, years	n=537	n=111	n=426
Mean ± SD	12.6 ± 4.2	10.4 ± 4.61	13.2 ± 3.88
Patient age groups, n (%)	n=537	n=111	n=426
0–1 years	16 (3.0)	3 (2.7)	13 (3.1)
2–5 years	38 (7.1)	18 (16.2)	20 (4.7)
6–11 years	110 (20.5)	44 (39.6)	66 (15.5)
12–14 years	126 (23.5)	15 (13.5)	111 (26.1)
15–17 years	247 (46.0)	31 (27.9)	216 (50.7)
Patient sex, n (%)	n=537	n=111	n=426
Male	340 (63.3)	67 (60.4)	273 (64.1)
Female	197 (36.7)	44 (39.6)	153 (35.9)

Concomitant conditions, n (%)	n=536	n=111	n=425
Food allergies	44 (8.2)	13 (11.7)	31 (7.3)
Asthma	72 (13.4)	19 (17.1)	53 (12.5)
Allergic rhinitis	129 (24.1)	25 (22.5)	104 (24.5)
None of the above	284 (53.0)	67 (60.4)	217 (51.1)
Time since diagnosis, years	n=244	n=44	n=200
Mean ± SD	4.2 ± 4.6	5.3 ± 4.7	3.9 ± 4.6
Areas of body affected, n (%)	n=537	n=111	n=426
Head and neck	377 (70.2)	76 (68.5)	301 (70.7)
Upper limbs	447 (83.2)	101 (91)	346 (81.2)
Trunk	407 (75.8)	90 (81.1)	317 (74.4)
Lower limbs	390 (72.6)	94 (84.7)	296 (69.5)
None of these	12 (2.2)	3 (2.7)	9 (2.1)
EASI Score	n=349	n=76	n=273
Mean ± SD	16.1 ± 12.3	17.1 ± 11.4	15.8 ± 12.6
BSA at survey, %	n=431	n=95	n=336
Mean ± SD	22.6 ± 18.5	23.7 ± 16.6	22.2 ± 19.1
Severity of AD at data collection, n (%)	n=537	n=111	n=426
	105 (19.6)	17 (15.3)	88 (20.7)

Mild	247 (46.0)	59 (53.2)	188 (44.1)
Moderate	185 (34.5)	35 (31.5)	150 (35.2)
Severe			
Severity of AD at initiation of treatment, n (%)	n=480	n=100	n=380
Mild	51 (10.6)	5 (5.0)	46 (12.1)
Moderate	260 (54.2)	58 (58.0)	202 (53.2)
Severe	169 (35.2)	37 (37.0)	132 (34.7)
Time since initiation of current treatment, months	n=373	n=78	n=295
Mean ± SD	13.3 ± 20.8	17.6 ± 23.3	12.2 ± 20.0
Current disease status, n (%)	n=537	n=111	n=426
Improving rapidly	28 (5.2)	11 (9.9)	17 (4.0)
Improving slowly	225 (41.9)	37 (33.3)	188 (44.1)
No change/stable	190 (35.4)	35 (31.5)	155 (36.4)
Deteriorating slowly	74 (13.8)	23 (20.7)	51 (12.0)
Deteriorating rapidly	20 (3.7)	5 (4.5)	15 (3.5)

Abbreviations: PSC, patient-self completion form; AD, atopic dermatitis; BSA, body surface area; EASI, Eczema Area and Severity Index; JAK-I, Janus kinase inhibitor; SD, standard deviation.

Supplementary table 3: Current treatment by patient age

Treatment at the time of data collection*, n (%)	Patient Age					
	Overall (n=513)	0-1 years (n=16)	2-5 years (n=35)	6-11 years (n=104)	12-14 years (n=119)	15-17 years (n=239)
Emollients / moisturizers	382 (74.5)	14 (87.5)	32 (91.4)	92 (88.5)	88 (73.9)	156 (65.3)
Topical corticosteroid	457 (89.1)	15 (93.8)	33 (94.3)	96 (92.3)	108 (90.8)	205 (85.8)
Low potency	180 (35.1)	13 (81.2)	25 (71.4)	53 (51.0)	35 (29.4)	54 (22.6)
Moderate potency	249 (48.5)	11 (68.8)	24 (68.6)	60 (57.7)	57 (47.9)	97 (40.6)
High potency	271 (52.8)	3 (18.8)	14 (40.0)	56 (53.8)	60 (50.4)	138 (57.7)
Ultra-high potency	69 (13.5)	0 (0.0)	2 (5.7)	12 (11.5)	20 (16.8)	35 (14.6)
Topical calcineurin inhibitor						
Tacrolimus	165 (32.2)	0 (0.0)	7 (20.0)	27 (26.0)	36 (30.3)	95 (39.7)
Systemic corticosteroids	19 (3.7)	0 (0.0)	2 (5.7)	2 (1.9)	5 (4.2)	10 (4.2)
Oral corticosteroid	17 (3.3)	0 (0.0)	2 (5.7)	2 (1.9)	5 (4.2)	8 (3.3)
Injected corticosteroid	3 (0.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	3 (1.3)

Immunosuppressant						
Cyclosporine	9 (1.8)	0 (0.0)	0 (0.0)	1 (1.0)	2 (1.7)	6 (2.5)
Biologic						
Dupilumab	63 (12.3)	1 (6.2)	0 (0.0)	0 (0.0)	2 (1.7)	60 (25.1)
Oral JAK-i	39 (7.6)	0 (0.0)	0 (0.0)	1 (1.0)	13 (10.9)	25 (10.5)
Upadacitinib	32 (6.2)	0 (0.0)	0 (0.0)	1 (1.0)	13 (10.9)	18 (7.5)
Abrocitinib	7 (1.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	7 (2.9)
Phototherapy	30 (5.8)	0 (0.0)	2 (5.7)	1 (1)	4 (3.4)	23 (9.6)
Other oral treatments	234 (45.6)	2 (12.5)	19 (54.3)	57 (54.8)	55 (46.2)	101 (42.3)
Antihistamine	232 (45.2)	1 (6.2)	19 (54.3)	56 (53.8)	55 (46.2)	101 (42.3)
Antibiotic for skin infection	10 (1.9)	1 (6.2)	1 (2.9)	3 (2.9)	2 (1.7)	3 (1.3)
Pain medication	5 (1.0)	0 (0.0)	0 (0.0)	1 (1.0)	2 (1.7)	2 (0.8)
Patient is not currently prescribed treatment for AD but has been previously	1 (0.2)	0 (0.0)	1 (2.9)	0 (0.0)	0 (0.0)	0 (0.0)

Footnotes: Percentages may total >100% as physicians were able to select multiple applicable responses from a list of relevant options. *Responses are not mutually exclusive as patients could have been receiving a combination of multiple treatments at the time of data collection.

Supplementary table 4: Physician and patient satisfaction with control of AD – full response list

Satisfaction with control of AD, n (%)	Physician-reported (n=513)	Patient-reported (n=89)
Extremely dissatisfied	7 (1.4)	2 (2.2)
Very dissatisfied	20 (3.9)	6 (6.7)
Dissatisfied	82 (16.0)	8 (9.0)
Neither satisfied nor dissatisfied	143 (27.9)	31 (34.8)
Satisfied	204 (39.8)	26 (29.2)
Very satisfied	47 (9.2)	10 (11.2)
Extremely satisfied	9 (1.8)	6 (6.7)

Footnotes: Physician-reported satisfaction with control of AD stratified by physician-reported disease severity (subjective classification) at point of data collection and patient-reported satisfaction with control of AD stratified by physician-reported disease severity (subjective classification) at point of data collection. Rated on a 7-point Likert scale ranging from “Extremely dissatisfied” to “Extremely satisfied”.

Abbreviations; AD, atopic dermatitis.