Survey of pediatric dermatologist views on treatment for alopecia areata

To the Editor: There is a lack of consensus regarding the treatment of pediatric alopecia areata (PAA). Baricitinib and ritlecitinib were recently approved for adult and adolescent (for ritlecitinib) alopecia areata (AA), but PAA has no US Food and Drug Administration-approved therapies. Guidance is needed to incorporate new therapies.[1] A survey was conducted to elucidate treatment preferences among pediatric dermatologists (PDs).

Fifty-three responses from 121 survey recipients were collected and analyzed. Respondents were

Table I. Therapy of choice for children 8 years or younger with alopecia areata

	First-line				Second-line			
	<25% Scalp		>25% Scalp		<25% Scalp		>25% Scalp	
	Fellowship trained	Nonfellowship trained	Fellowship trained	Nonfellowship trained	Fellowship trained	Nonfellowship trained	Fellowship trained	Nonfellowship trained
Class 1 topical corticosteroids	31 (79.5%)	5 (35.7%)*	26 (66.7%)	7 (53.8%)	5 (12.8%)	2 (15.4%)	2 (5.1%)	4 (30.8%)
Class 2 topical corticosteroids	11 (28.2%)	6 (42.9%)*	11 (28.2%)	5 (38.5%)	1 (2.6%)	1 (7.7%)	3 (7.7%)	0 (0%)
Class 3 topical corticosteroids	0 (0%)	2 (14.3%)	0 (0%)	1 (7.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Class 4 topical corticosteroids	1 (2.6%)	1 (7.1%)	0 (0%)	1 (7.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Class 5 topical corticosteroids	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Topical anthralin	N/A	N/A	2 (5.1%)	1 (7.7%)	6 (15.4%)	3 (23.1%)	5 (12.8%)	4 (30.8%)
Topical calcineurin inhibitors	3 (7.7%)	1 (7.1%)	2 (5.1%)	1 (7.7%)	3 (7.7%)	1 (7.7%)	4 (10.3%)	1 (7.7%)
Topical immunotherapy (squaric acid, DCP, DNCB)	N/A	N/A	5 (12.8%)	1 (7.7%)	9 (23.1%)	5 (38.5%)	13 (33.3%)	4 (30.8%)
Intralesional triamcinolone	N/A	N/A	2 (5.1%)	3 (23.1%)*	18 (46.2%)	10 (76.9%)*	3 (7.7%)	3 (23.1%)*
Topical JAK inhibitors	N/A	N/A	3 (7.7%)	1 (7.7%)	8 (20.5%)	3 (23.1%)	4 (10.3%)	2 (15.4%)
Oral JAK inhibitors	N/A	N/A	2 (5.1%)	0 (0%)	2 (5.1%)	2 (15.4%)	4 (10.3%)	2 (15.4%)
Hydroxychloroquine	N/A	N/A	2 (5.1%)	0 (0%)	0 (0%)	0 (0%)	1 (2.6%)	0 (0%)
Topical minoxidil 2% solution	5 (12.8%)	1 (7.1%)	3 (7.7%)	1 (7.7%)	2 (5.1%)	1 (7.7%)	4 (10.3%)	2 (15.4%)
Topical minoxidil 5% solution	6 (15.4%)	3 (21.4%)	9 (23.1%)	4 (30.8%)	10 (25.6%)	4 (30.8%)	8 (20.5%)	7 (53.8%)
Excimer laser	N/A	N/A	3 (7.7%)	1 (7.7%)	3 (7.7%)	1 (7.7%)	2 (5.1%)	1 (7.7%)
Topical PUVA	N/A	N/A	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Oral PUVA	N/A	N/A	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Narrowband UVB	N/A	N/A	0 (0%)	0 (0%)	1 (2.6%)	0 (0%)	2 (5.1%)	0 (0%)
Oral steroids	N/A	N/A	9 (23.1%)	2 (15.4%)	3 (7.7%)	1 (7.7%)	10 (25.6%)	3 (23.1%)
Oral methotrexate	1 (2.6%)	0 (0%)	5 (12.8%)	0 (0%)	2 (5.1%)	0 (0%)	15 (38.5%)	2 (15.4%)*
None of the above	1 (2.6%)	0 (0%)	0 (0%)	0 (0%)	2 (5.1%)	0 (0%)	1 (2.6%)	0 (0%)
Other	6 (15.4%)	3 (21.4%)	3 (7.7%)	3 (23.1%)	3 (7.7%)	4 (30.8%)	5 (12.8%)	5 (38.5%)
Total	39	14	39	13	39	13	39	13

DCP, Dipencyclopropenone; *DNCB*, dinitrochlorobenzene; *PUVA*, psoralens and ultraviolet A; *UVB*, ultraviolet B
*Statistically significant.

Table II. Therapy of choice for children ages 8 years or older with alopecia areata

	First-line				Second-line			
	<25% Scalp		>25% Scalp		<25% Scalp involvement		>25% Scalp	
	Fellowship trained	Nonfellowship trained	Fellowship trained	Nonfellowship trained	Fellowship trained	Nonfellowship trained	Fellowship trained	Nonfellowship trained
Class 1 topical corticosteroids	29 (74.4%)	7 (58.3%)	19 (50.0%)	8 (61.5%)	8 (20.5%)	4 (30.8%*)	2 (5.4%)	4 (30.8%)*
Class 2 topical corticosteroids	9 (23.1%)	4 (33.3%)	9 (23.7%)	4 (30.8%)	3 (7.7%)	1 (7.7%)	2 (5.4%)	2 (15.4%)*
Class 3 topical corticosteroids	0 (0%)	1 (8.3%)	0 (0%)	1 (7.7%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Class 4 topical corticosteroids	0 (0%)	1 (8.3%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Class 5 topical corticosteroids	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Topical anthralin	1 (2.6%)	0 (0%)	1 (2.6%)	0 (0%)	5 (12.8%)	4 (30.8%)	6 (16.2%)	5 (38.5%*)
Topical calcineurin inhibitors	4 (10.3%)	2 (16.7%)	4 (10.5%)	1 (7.7%)	5 (12.8%)	1 (7.7%)	6 (16.2%)	1 (7.7%)
Topical immunotherapy (squaric acid, DCP, DNCB)	0 (0%)	2 (16.7%)	7 (18.4%)	2 (15.4%)	9 (23.1%)	3 (23.1%)	11 (29.7%)	5 (38.5%)
Intralesional triamcinolone	13 (33.3%)	4 (33.3%)	10 (26.3%)	3 (23.1%)	18 (46.2%)	10 (76.9%)	12 (32.4%)	3 (23.1%)
Topical JAK inhibitors	1 (2.6%)	2 (16.7%)	2 (5.3%)	2 (15.4%)	6 (15.4%)	1 (7.7%)	8 (21.6%)	3 (23.1%)
Oral JAK inhibitors	0 (0%)	0 (0%)	4 (10.5%)	1 (7.7%)	2 (5.1%)	0 (0%)	8 (21.6%)	4 (30.8%)
Hydroxychloroquine	0 (0%)	0 (0%)	2 (5.3%)	0 (0%)	N/A	N/A	0 (0%)	1 (7.7%)
Minoxidil 2% solution	1 (2.6%)	0 (0%)	1 (2.6%)	0 (0%)	2 (5.1%)	2 (15.4%)	3 (8.1%)	1 (7.7%)
Minoxidil 5% solution	8 (20.5%)	2 (16.7%)	11 (28.9%)	3 (23.1%)	8 (20.5%)	7 (53.8%)	13 (35.1%)	6 (46.2%)
Excimer laser	0 (0%)	1 (8.3%)	0 (0%)	0 (0%)	1 (2.6%)	1 (7.7%)	3 (8.1%)	1 (7.7%)
Topical PUVA	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (2.7%)	0 (0%)
Oral PUVA	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Narrowband UVB	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (7.7%)	3 (8.1%)	0 (0%)
Oral steroids	1 (2.6%)	0 (0%)	11 (28.9%)	1 (7.7%)	3 (7.7%)	1 (7.7%)	9 (24.3%)	4 (30.8%)
Oral methotrexate	1 (2.6%)	0 (0%)	8 (21.1%)	0 (0%)	6 (15.4%)	0 (0%)	16 (43.2%)	3 (23.1%)
None of the above	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (2.6%)	0 (0%)	0 (0%)	0 (0%)
Other	4 (10.3%)	2 (16.7%)	5 (13.2%)	3 (23.1%)	1 (2.6%)	4 (30.8%)	0 (0%)	4 (30.8%)
Total	39	12	38	13	39	13	37	13

*Statistically significant.

primarily board-certified US PD (Supplementary Table I, available via Mendeley at https://www.mendeley.com/reference-manager/reader-v2/a4d97671-c02d-3272-9f02-c572bcb30eca/4d7d54f1-04b9-a3c7-3603-3e5a9e546c9f). The majority of practitioners perform laboratory tests in select patients (Supplementary Table II, available via Mendeley at https://www.mendeley.com/reference-manager/reader-v2/a4d97671-c02d-3272-9f02-c572bcb30eca/4d7d54f1-04b9-a3c7-3603-3e5a9e546c9f).

For PAA patient younger than 8 years of age with any hair loss, first-line therapy consisted mostly of class 1 and 2 topical corticosteroids, with preference for the former in fellowship trained (FT). Second-line therapy for the same age group with less than 25% scalp involvement consisted of intralesional triamcinolone (ILT) more commonly used by non-FT PD, topical immunotherapy, and minoxidil 5% solution. The top three preferred second-line treatments for the same age group with more than 25% scalp involvement included oral methotrexate more used by FT PD, topical immunotherapy, and minoxidil 5% solution (Table I).

For patients, 8 years and older with less than 25% scalp involvement, first-line agents were Class 1 corticosteroids and ILT. Preferred second-line treatment for this group was ILT followed by topical minoxidil 5% solution. First-line therapies for patients 8 years or older with greater than 25% scalp involvement was class 1 topical corticosteroids and minoxidil 5% solution. The most common second-line treatments for this group included oral methotrexate,

preferred by FT, and minoxidil 5% solution preferred by non-FT (Table II). Overall, 32.7% of practitioners have 1-5 pediatric patients on a topical or oral janus kinase inhibitor (JAKi), primarily as a second-line agent.

PAA is an autoimmune-mediated disease. Treatments target the immune system.[2] Children have a higher surface area to body volume ratio and are more prone to systemic effects of topical agents.[1] Still, Class 1 and 2 topical corticosteroids are the first-line therapy used by most PD, FT favoring Class 1.[3]

Respondents were just as likely to use methotrexate as topical immunotherapy when choosing second-line agents for PAA less than 8 years of age with greater than 25% scalp involvement, possibly reflecting the need for systemic agents to control severe disease.[3] Despite Black Box warning on JAKi including infections, malignancy, anemia, and thrombosis[4] they are being used, highlighting the general need for new therapeutics in PAA.

Limitations of the study include selection bias, sample size, and skew toward junior respondents. The survey did not address best practices regarding length of therapeutic trial, long-term monitoring, or counseling practices.

This survey of PD can be highly instructive to general practitioners treating AA and demonstrates very consistent practice patterns. Class 1 and 2 topical corticosteroids are almost universally used as first-line treatments in pediatric AA for limited and extensive cases. Additionally, many PD are incorporating the use of topical and oral JAKi in the treatment of pediatric AA, highlighting the major need for further drug safety and efficacy studies with JAKi for pediatric AA.

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Conflicts of interest

Kimberly D. Morel: Phoenix Tissue Repair, Nanette Silverberg: Amryt, Pfizer, Regeneron.

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