

**Quality of life in children with atopic dermatitis seen in the department of dermatology at the university hospital, Antananarivo Madagascar**



*To the Editor:* Evaluation of how atopic dermatitis (AD) affects the quality of life (QoL) of patients and their families is crucial.<sup>1</sup> Studies related to QoL in patients with AD are uncommon in Africa, notably in Madagascar. Therefore, we aim to assess the impact of AD in the QoL of Malagasy children and their families.

A cross-sectional study was carried out in the dermatology department of the university hospital in Antananarivo, Madagascar, from January to December 2020. According to the United Kingdom Working Party criteria, 66 children with a confirmed diagnosis of AD between the ages of 0 to 16 years were included.

The scoring atopic dermatitis index was used to assess the severity of AD. Infants' Dermatitis Quality of Life, Children's Dermatology Life Quality Index, Dermatitis Family Impact questionnaires were used to evaluate the QoL of participants aged <5 and between 5 and 16 years and parents of children with AD, respectively.

Epi info version 7.2.2.6 (Centers for Disease Control and Prevention) was used for the statistical analysis. The correlations between the demographic, clinical parameters, and QoL scores of the patients were analyzed. Fisher's exact test was applied for qualitative variables and  $P \leq .05$  was considered as statistically significant.

The mean age of the patients was  $4.1 \pm 4.6$  years (minimum: 2 months; maximum: 15 years). The male-female sex ratio was 0.67. The median age of onset was 5 months. The mean duration that AD lasted was  $2.76 \pm 8.83$  years. The mean  $\pm$  SD scoring atopic dermatitis index score was  $40.3 \pm 14.5$ . Sociodemographics and clinical characteristics of children with AD are shown in Table I.

Our results show that there is a moderate impact of AD on children's QoL; the mean Infants' Dermatitis Quality of Life score was  $11.3 \pm 3.8$  for infants aged <5 years. After treatment, the mean Infants' Dermatitis Quality of Life score decreased significantly to  $9.3 \pm 4.4$ . The mean Children's Dermatology Life Quality Index score was

**Table I.** Sociodemographics and clinical characteristics of children with AD (N = 62).

Parameters	n
Age (y)	
<5	41
5-16	21
Mean age $\pm$ SD	$4.1 \pm 4.6$
Sex	
Male	25
Female	37
Education level of parents	
Low (primary school)	0
Middle (secondary school)	16
High (university)	46
Age of onset (y)	
0-2	46
2-5	11
5-10	3
10-16	2
Disease duration (y)	
<1	33
1-3	8
3-5	10
$\geq 5$	11
Concomitant atopic disease	
Asthma	5
Allergic rhinitis	4
Allergic conjunctivitis	0
Food allergy	2
Family history of atopy	
Asthma	4
Allergic rhinitis	19
Allergic conjunctivitis	0
AD	17
Food allergy	3
Topography of lesions	
Face	16
Trunk	8
Upper limbs	19
Lower limbs	17
Severity according to SCORAD	
Mild AD (SCORAD < 25)	9
Moderate AD (SCORAD 25-50)	38
Severe AD (SCORAD > 50)	15
Mean SCORAD $\pm$ SD	$40.3 \pm 14.5$

AD, Atopic dermatitis; SCORAD, scoring atopic dermatitis index.

$10.9 \pm 3.7$  for children aged 5 to 15 years. The mean Children's Dermatology Life Quality Index score following treatment was higher than it was at the baseline ( $14 \pm 2.2$  vs  $10.9 \pm 3.7$ ).

A moderate impact on the families' QoL was observed; the mean Dermatitis Family Impact score

© 2022 by the American Academy of Dermatology, Inc. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

**Table II.** Quality of life scores in relation to severity of AD

	AD severity (SCORAD)			P
	Mild	Moderate	Severe	
IDQOL (mean $\pm$ SD)	4.9 $\pm$ 3.1	10.7 $\pm$ 3.8	18.5 $\pm$ 4.9	.001
CDLQI (mean $\pm$ SD)	6.2 $\pm$ 3.2	9.9 $\pm$ 4.1	16.5 $\pm$ 4.1	.005
DFI (mean $\pm$ SD)	5.9 $\pm$ 2.9	9.8 $\pm$ 3.2	16.9 $\pm$ 5.2	.002

AD, Atopic dermatitis; DFI, Dermatitis Family Impact; CDLQI, Children's Dermatology Life Quality Index; IDQOL, Infants' Dermatitis Quality of Life; SCORAD, scoring atopic dermatitis index.

was  $10.6 \pm 4.6$ . No correlation between the demographic and therapeutic parameters and QoL was found in our study. However, significant correlation was found between the severity of AD and QoL in infants and children; the higher the severity of AD, the greater the importance of the effect in children's QoL. The impairment of QoL in infants and their families was also proportional to the severity of AD (Table II).

The correlation between the severity of AD and children's QoL may be explained by the high rate of first consultation in our study; these children would probably have presented AD for a long time. Hence, AD had a significant impact on their QoL. Similar results were also reported in Romania<sup>2</sup> and Denmark.<sup>3</sup> Furthermore, the impairment of parents' QoL was highly correlated to the severity of AD in infants aged <5 years. This finding was consistent with that reported by Yang et al<sup>4</sup> and Beattie et al.<sup>5</sup>

Our study suggests that AD is associated with an impaired QoL in Malagasy children and their families.

*Fandresena Arilala Sendrasoa, MD, Tsiory Iarintsoa Razafimaharo, MD, Lala Soavina Ramarozatovo, MD, and Fabafabantsoa Rapelanoro Rabenja, MD*

*From the Department of Dermatology, Faculty of Medicine, University of Antananarivo, Antananarivo, Madagascar.*

*Funding sources: None.*

*IRB approval status: All study procedures were performed in accordance with the Ethics Committee of the University Hospital Joseph Raseta Befelatanana Antananarivo, Madagascar.*

*Key words: atopic dermatitis; children; quality of life.*

*Correspondence to: Fandresena Arilala Sendrasoa, MD, Department of Dermatology, Faculty of Medicine, University of Antananarivo, Antananarivo 101, Madagascar*

*E-mail: nasendrefa@yahoo.fr*

#### Conflicts of interest

None disclosed.

#### REFERENCES

1. What quality of life? The WHOQOL Group. World Health Organization Quality of Life Assessment. *World Health Forum*. 1996;17(4):354-356.
2. Sur M, Boca A, Ilies R, Floca E, Tataru A, Sur L. Correlation between quality of life and disease severity of pediatric patients with atopic dermatitis. *Exp Ther Med*. 2020;20(6):189.
3. Holm JG, Agner T, Clausen ML, Thomsen SF. Quality of life and disease severity in patients with atopic dermatitis. *J Eur Acad Dermatol Venereol*. 2016;30(10):1760-1767.
4. Yang EJ, Beck KM, Sekhon S, Bhutani T, Koo J. The impact of pediatric atopic dermatitis on families: a review. *Pediatr Dermatol*. 2019;36(1):66-71.
5. Beattie PE, Lewis-Jones MS. An audit of the impact of a consultation with a paediatric dermatology team on quality of life in infants with atopic eczema and their families: further validation of the Infants' Dermatitis Quality of Life Index and Dermatitis Family Impact score: impact of dermatology consultation on QoL. *Br J Dermatol*. 2006; 155(6):1249-1255.

<https://doi.org/10.1016/j.jdin.2022.11.004>