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ORIGINAL ARTICLE

Analysis of quality of life in children suffering from atopic dermatitis

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ABSTRACT:
Background: The etiology of atopic dermatitis (AD), a chronic inflammatory skin disorder, is complex. The words "derma" (meaning skin) and "itis" (meaning inflammation) are the Greek roots of the word "dermatitis."The present study was conducted to assess the quality of life in children with atopic dermatitis. **Materials & Methods:** 85children withatopic dermatitis of both genderswere evaluated using the Children's Dermatology Life Quality Index (CDLQI) and the impairment of the quality-of-life score (IDQOL). **Results:** Out of 85 patients, 40 were malesand 45 were females. The total CDLQI score in mild impairment at baseline was 9.3 and after 1 year was 3.1. In moderate impairment at baseline was 0.9 and after 1 year was 0.6 and in severe impairment at baseline was 0.8 and after 1 year was 1.7 respectively. The difference was significant (P< 0.05). The mean IDQOL score in mild impairment at baseline was 9.4 and after 1 year was 2.3. In moderate impairment at baseline was 11.6 and after 1 year was 9.1 and in severe impairment at baseline was 10.2 and after 1 year was 15.8 respectively. The difference was significant (P< 0.05). **Conclusion:** Children with less severe atopic dermatitis are more likely to see a notable improvement in their quality of life due to atopic dermatitis.
Key words: Atopic dermatitis, Life Quality Index, Dermatologist

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INTRODUCTION

The etiology of atopic dermatitis (AD), a chronic inflammatory skin disorder, is complex. The words "derma" (meaning skin) and "itis" (meaning inflammation) are the Greek roots of the word "dermatitis."[1] Despite the widespread belief that AD is a childhood illness, there is growing evidence that AD is more common in adults. About 50% of patients with atopic dermatitis experience symptoms during their first year of life, and up to 95% of them start before the age of five.[2]

The quality of life of both younger and older children can be negatively impacted by atopic dermatitis because it is a chronic condition that interferes with everyday functioning. Children with atopic dermatitis experience minor to severe quality of life impairment.[3] Evidence currently available indicates that children's poor quality of life is linked to negative outcomes associated with atopic dermatitis, including noncompliance with medical treatment, fear of corticosteroids, ignorance of atopic dermatitis, and use of alternative and complementary therapies.T-cell-driven inflammation, epidermal dysfunction, and hereditary vulnerability are all part of the complex pathophysiology of AD.[4] A greater incidence of several comorbid illnesses, including food allergies, asthma, and allergic rhinitis, is also associated with AD. In addition to atopic ailments, comorbidities include other skin conditions, gastrointestinal, musculoskeletal, and cardiovascular problems. There are notable differences in AD symptoms between age groups, ethnic groupings, and geographic locations, which could influence the diagnosis of AD.[5]The present study was conducted to assess the quality of life in children with atopic dermatitis.

MATERIALS & METHODS

The present study consisted of 85children withatopic dermatitis of both genders. Parents were informed regarding the study and gave their written consent to participate in the study.

Data such as name, age, gender, etc. was recorded. The Children's Dermatology Life Quality Index (CDLQI) was used to assess the patients. Due to atopic dermatitis, the child's quality of life score was impaired in the following ways: 0–1 = no effect, 2–6 = modest effect, 7–12 = moderate effect, 13–18 = very significant effect, and 19–30 = extremely large effect.10. The same dermatologist (VR) used the scoring Atopic Dermatitis index (SCORAD) to evaluate the severity of atopic dermatitis at baseline and one year later. Data thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 85		
Gender	**Male**	**Female**
Number	40	45

Table I shows that out of 85 patients, 40 were malesand 45 were females.

Table II Evaluation of children's dermatology life quality index

Dermatology life quality index	Baseline	After 1 year	P value
Mild impairment	9.3	3.1	0.01
Moderate impairment	0.9	0.6	0.05
Severe impairment	0.8	1.7	0.04

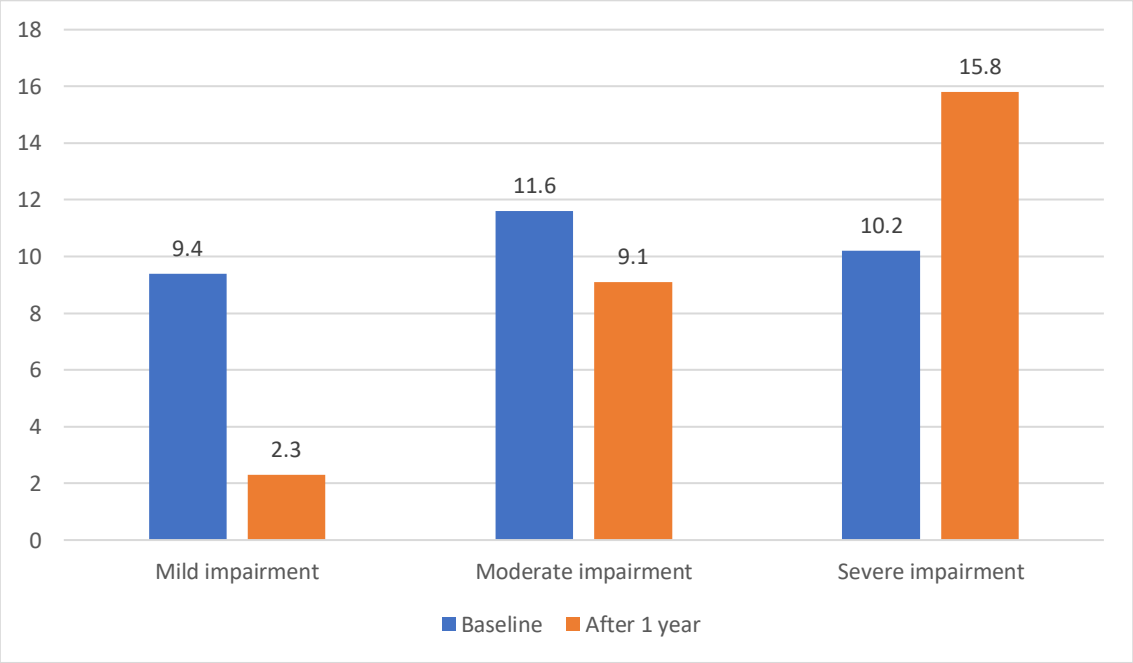
Table II shows that the total CDLQI score in mild impairment at baseline was 9.3 and after 1 year was 3.1. In moderate impairment at baseline was 0.9 and after 1 year was 0.6 and in severe impairment at baseline was 0.8 and after 1 year was 1.7 respectively. The difference was significant (P< 0.05).

Table III Impairment of children's quality of life

Children's quality of life	Baseline	After 1 year	P value
Mild impairment	9.4	2.3	0.01
Moderate impairment	11.6	9.1	0.05
Severe impairment	10.2	15.8	0.02

Table III shows that the mean IDQOL score in mild impairment at baseline was 9.4 and after 1 year was 2.3. In moderate impairment at baseline was 11.6 and after 1 year was 9.1 and in severe impairment at baseline was 10.2 and after 1 year was 15.8 respectively. The difference was significant (P< 0.05).

Graph I Impairment of children's quality of life



DISCUSSION

Approximately 50–75% of children with early-onset atopic dermatitis are sensitized to one or more allergens, such as food allergens, dust mites in the home, or pets, in contrast to those with late-onset atopic dermatitis.[6,7] However, many atopic dermatitis patients have food sensitivities without these sensitivities exacerbating their eczema; consuming specific foods or being exposed to airborne allergens seldom causes atopic dermatitis exacerbations. Atopic dermatitis is a marker of other atopic diseases when it strikes a child in a serious manner. Children with moderate to severe atopic dermatitis have a 50% chance of developing asthma and a 75% chance of developing hay fever.[8]The present study was conducted to assess the quality of life in children with atopic dermatitis.

We found that out of out of 85 patients, 40 were malesand 45 were females.In their investigation, Kim and colleagues[9] evaluated 415 AD patients. The QOL of 71 babies, 197 children, and 147 adults was assessed using a questionnaire based on the babies'

Dermatitis Quality of Life Index (IDQOL), the Children's Dermatology Life Quality Index (CDLQI), and the Dermatology Life Quality Index (DLQI). The Rajka & Langeland scoring system and the Scoring of Atopic Dermatitis (SCORAD) index were both used to gauge the severity of AD. 6.6 ± 6.3 for CDLQI, 10.7 ± 7.9 for DLQI, and 7.7 ± 5.5 for IDQOL were the mean values. In summary, there is a correlation between these QOL ratings and the Rajka & Langeland severity score and the SCORAD, which measure the severity of AD. The results of this study's QOL instruments show that both children's and adults' QOL is impacted by atopic dermatitis.

We found that the total CDLQI score in mild impairment at baseline was 9.3 and after 1 year was 3.1. In moderate impairment at baseline was 0.9 and after 1 year was 0.6 and in severe impairment at baseline was 0.8 and after 1 year was 1.7 respectively. Saeki et al[10]evaluated precisely the prevalence of AD in elementary schoolchildren in Japan based on regular health check-ups by dermatologists.The point prevalence of AD was 11.2% overall (2664 of 23 719) ranging from 7.4% (Iwate) to 15.0% (Fukuoka) in the eight areas. Seventy-four per cent, 24%, 1.6% and 0.3% of those afflicted were in the mild, moderate, severe and very severe groups, respectively. Overall, the prevalence of first graders was slightly higher than that of sixth graders (11.8% vs. 10.5%, P < 0.01). There was no apparent difference in prevalence between urban and rural districts, or between boys and girls.

We found that the mean IDQOL score in mild impairment at baseline was 9.4 and after 1 year was 2.3. In moderate impairment at baseline was 11.6 and after 1 year was 9.1 and in severe impairment at baseline was 10.2 and after 1 year was 15.8 respectively. Schultz et al[11]determined the increased prevalence of atopic dermatitis in North Europe.Approximately 3000 7-year-old children in Denmark, Germany, and Sweden were enrolled in a cross-sectional questionnaire study. The response rate was 90%. The frequency of atopic dermatitis was calculated to be 15.6% (95% confidence interval 14.2% to 17%) with some regional differences. Girls more often had flexural eczema and outnumbered boys in a ratio of 1.3:1.0. Boys more often had a personal history of asthma, whereas girls more often had a family history of asthma.

Mortz et al[12]assessed prevalence measures of atopic dermatitis (AD), asthma, allergic rhinitis and hand and contact dermatitis in adolescents in Odense municipality, Denmark.The study was carried out as a cross-sectional study among 1501 eighth grade school children (age 12-16 years) and included questionnaire, interview, clinical examination and patch testing.The lifetime prevalence of AD was 21.3% (girls 25.7% vs. boys 17.0%, P < 0.001) using predefined questionnaire criteria. The 1-year period prevalence of AD was 6.7% and the point prevalence 3.6% (Hanifin and Rajka criteria). In the interview the lifetime prevalence of inhalant allergy was estimated as 17.7% (6.9% allergic asthma, 15.7% allergic rhinitis). The lifetime prevalence of hand eczema based on the questionnaire was 9.2%, the 1-year period prevalence was 7.3% and the point prevalence 3.2%, with a significant predominance in girls. A significant association was found both between AD and inhalant allergy, and between AD and hand eczema using lifetime prevalence measures. The point prevalence of contact allergy was 15.2% (girls 19.4% vs. boys 10.3%, P < 0.001), and present or past allergic contact dermatitis was found in 7.2% (girls 11.3% vs. boys 2.5%). Contact allergy was most common to nickel (8.6%) and fragrance mix (1.8%).

The limitation of the study is small sample size.

CONCLUSION

Authors found that children with less severe atopic dermatitis are more likely to see a notable improvement in their quality of life due to atopic dermatitis.

REFERENCES

1. Saeki H, Oiso N, Honma M, Odajima H, Iizuka H, Kawada A, et al. Comparison of prevalence of atopic dermatitis in Japanese elementary school children between 2001⁄2002 and 2007⁄2008. J Dermatol 2009; 36: 512–514.
2. Hanifin JM. Secular change in the occurrence of atopic dermatitis. Acta dermato-venereologica. Supplementum. 1992 Jan 1;176:7-12.
3. Haileamlak A, Lewis SA, Britton J, Venn AJ, Woldemariam D, Hubbard R, et al. Validation of the international study of asthma and allergies in children (ISAAC) and U.K. criteria for atopic eczema in Ethiopian children. Br J Dermatol 2005; 152: 735–741.
4. Hanifin JM, Thurston M, Omoto M, Cherill R, Tofte SJ, Graeber M. The eczema area and severity index (EASI): assessment of reliability in atopic dermatitis. EASI Evaluator Group. Exp Dermatol 2001; 10: 11–18.
5. Falade AG, Olawuyi JF, Osinusi K, Onadeko BO. Prevalence and severity of symptoms of asthma, allergic rhino conjunctivitis, and atopic eczema in 6- to 7-year-old Nigerian primary school children: the International Study of Asthma and Allergies in Childhood. Med Princ Pract 2004; 13: 20–25
6. Salek MS, Jung S, Brincat-Ruffini LA, MacFarlane L, Lewis-Jones MS, Basra MK, et al. Clinical experience and psychometric properties of the Children's Dermatology Life Quality Index (CDLQI), 1995–2012. Br J Dermatol 2013;169:734-59.
7. Kim DH, Li K, Seo SJ, Jo SJ, Yim HW, Kim CM, Kim KH, Kim MB, Kim JW, Ro YS, Park YL. Quality of life and disease severity are correlated in patients with atopic dermatitis. Journal of Korean medical science. 2012 Nov 1;27(11):1327-32.
8. Saeki H, Iizuka H, Mori Y, Akasaka T, Takagi H, Kitajima Y, et al. Prevalence of atopic dermatitis in Japanese elementary schoolchildren. Br J Dermatol 2005; 152: 110–114.
9. Schultz Larsen F, Svensson A, Diepgen TL, From E. The occurrence of atopic dermatitis in Greenland. Acta Derm Venereol 2005; 85: 140–143.

10. Mortz CG, Lauritsen JM, Bindslev-Jensen C, Andersen KE. Prevalence of atopic dermatitis, asthma, allergic rhinitis, and hand and contact dermatitis in adolescents. The Odense Adolescence Cohort Study on Atopic Diseases and Dermatitis. British Journal of Dermatology. 2001 Mar 1;144(3):523-32.
11. Gotthard Mortz C, Lauritsen JM, Bindslev-Jensen C, Andersen KE. Contact Allergy and Allergic Contact Dermatitis in Adolescents: Prevalence Measures and Associations. Acta Dermato-Venereologica. 2002 Sep 1;82(5).
12. Nielsen NH, Linneberg A, Menné T, Madsen F, Frølund L, Dirksen A, Jørgensen T. The association between contact allergy and hand eczema in 2 cross-sectional surveys 8 years apart: The Copenhagen Allergy Study. Contact Dermatitis. 2002 Aug;47(2):71-7.