

Alopecia Areata in Children: Quality of Life for Children and Their Parents

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Abstract Alopecia areata with its different clinical forms creates an important psychosocial burden and strongly influence the quality of life of patients and their parents, but data reported in the literature on the quality of life of parents are scarce. Objectives: The aim of our study was to describe and evaluate the quality of life of pediatric patients with alopecia areata and their parents. Secondary objectives were to investigate the relationship between quality of life and disease severity, disease duration and patient age. Materials and methods: Cross-sectional study including pediatric cases in patients under 14 years of age and their parents, using the Childhood Chronic Disease Quality of Life Score (CCDQ), Family Dermatology Life Quality Index (FDLQI) and Children's Dermatologic Life Quality Index (CDLQI). SALT scores at the time of the study were recorded. Results: A statistically significant positive association was found between the SALT scores and the FDLQI scores. Duration of disease showed a significant negative correlation with the emotional domain scores of the QLCCDQ, but no significant correlation with the mean scores per QLCCDQ or the overall FDLQI scores. Child age was negatively correlated with the per-item QLCCDQ and emotional domain scores but the relationship between age and FDLQI score was not statistically significant. Conclusion: Our study demonstrates the negative impact of alopecia areata on the quality of life of the parents of affected children especially in the emotional domain. The impairment of the patients' quality of life was mainly influenced by the severity of the disease and the age of the affected child, but not by the duration of the disease.

Keywords: alopecia areata, quality of life, children, parents

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1. Introduction

Alopecia areata is an autoimmune disease of the hair follicles that causes non-scarring alopecia. It is a common condition in children with an unpredictable course, multiple presentations and variable psychological distress [1]. It can alter the self-image, the psycho-affective and social quality of life of the individual, especially during childhood and adolescence, periods considered vulnerable. Due to its visibility, lack of curative treatment and chronic nature, alopecia areata with its different clinical forms, can also create an important psychosocial burden and strongly influence the quality of life of patients and their parents, but data reported in the literature on the quality of life of parents are scarce [2].

The aim of our study was to describe and evaluate the quality of life of pediatric patients with alopecia areata and their parents. Secondary objectives were to investigate the relationship between quality of life and disease severity, disease duration and patient age.

2. Materials and Methods

We conducted a cross-sectional study of patients with alopecia areata less than 14 years of age and their parents in the Dermatology Department of the Ibn Rochd University Hospital between January 2020 and June 2022. Two questionnaires were completed by one of the parents: the Child Chronic Disease Quality of Life Questionnaire (CCDQ), which measures the quality of life of parents of children with general chronic diseases, and the Family Dermatology Life Quality Index (FDLQI). Children older than 7 years or with appropriate reading and cognitive skills were asked to complete the Children's Dermatologic Life Quality Index (CDLQI). The SALT score (a tool to measure the severity of alopecia) at the time of the study was recorded. Medical records were reviewed for patient demographics and date of diagnosis.

The QLCCDQ is a 15-item general questionnaire on quality of life in chronic disease. Responses to each item are based on a Likert scale ranging from 1 (very bothered or limited) to 7 (not bothered or limited). Responses are

based on the parents' perceptions during the previous 2 weeks.

This questionnaire was designed to target three different components of quality of life, referred to as the emotional (4 questions), parents perception of the child's symptoms (3 questions), and role limitations, including social (3 questions), occupational (3 questions) and family (2 questions).

Lower scores on the FDLQI correlate with higher impairment of quality of life. The FDLQI is a 10-item questionnaire measuring the impact of skin diseases on the families of affected patients. FDLQI scores are expressed as a total of 30 possible points, with higher scores representing greater deterioration in quality of life.

CDLQI scores are reported as a total sum of 30 possible points, with higher scores representing greater deterioration in the child's quality of life.

Patients were divided by SALT score into severity subclasses S1 (0%-24%), S2 (25%-49%), S3 (50%-74%), S4 (75%-99%), and S5 (100%).

3. Results

Characteristics of the children: 34 patients were included. The mean age was 9,1. The sex ratio M/F was 0,93. The mean duration of evolution was 15,7 months. The mean SALT scores at the time the parents completed the questionnaire were 34,2. Of our patients, 63,1% had mild disease, 30,4% had moderate disease, and 6,5% had severe disease. The mean overall CDLQI score was 17,9. Items indicated impaired quality of life addressing physical symptoms and discomfort or self-awareness.

Parent Characteristics: Among participating parents, the female-to-male ratio was 3:1. The mean age was 36,5 years. Descriptive results of the FDLQI and QLCCDQ completed by the participating parents are presented in Table 1. Statistically significant negative correlations were found between SALT scores and emotional domain scores on the QLCCDQ (Table 2). A statistically significant positive association was found between the SALT scores and the FDLQI scores. Duration of disease showed a significant negative correlation with the emotional domain scores of the QLCCDQ, but no significant correlation with

the mean scores per QLCCDQ or the overall FDLQI scores. Child age was negatively correlated with the per-item QLCCDQ and emotional domain scores but the relationship between age and FDLQI score was not statistically significant.

4. Discussion

Quality of life assessment has gained importance in chronic, non-life threatening diseases such as skin conditions [2]. Quality of life assessment helps in clinical practice to judge the impact of the disease on aspects of the patients' daily life.

Through this study we described the quality of life of relatives, rather than family members in general, of patients with alopecia areata by examining the factors that affect their quality of life. The QLCCDQ is intended for parents, whereas the FDLQI is intended to be used by all first-degree relatives of patients with alopecia areata. The inclusion of the QLCCDQ allows for a more focused investigation than using the FDLQI score alone. In addition, the domain approach of the QLCCDQ allows us to assess some of the specific components of overall quality of life.

The FDLQI score for parents of children with alopecia areata (7,3) (Table 2) were lower than those reported for parents of children with atopic dermatitis (13,6-17) but within the range of scores reported by parents of children with psoriasis (8,8) [3,4,5].

Based on the QLCCDQ scores, we found deterioration in parents' quality of life that was primarily emotional. On average, the scores for the emotional domain of the QLCCDQ (4,3) were similar to those reported in parents of children with stable, chronic diseases (4,5), such as type I diabetes and asthma [6].

Several studies have also shown that the more severe the hair loss, the greater the impact on quality of life, specifically on daily activity, psychology and social relationships [7]. Our study complements the results of previous research on QoL by showing that the parent's overall and emotional QoL decreases with increasing disease severity and age of the affected child (Table 2).

Table 1. Quality of life outcomes, by severity subgroup of peladic disease

Patient or parent subgroup	N	Mean FDLQI overall score +/-SD	Emotional domain	Occupational roles domain	Social roles domain	Family roles domain	Symptom perception domain
B	14	5.6 +/- 4.6	4.9 +/- 1.4	6.9 +/- 1.1	6.5 +/- 0.66	6.7 +/- 0.6	5.7 +/- 1.7
S2	7	6.6 +/- 4.3	4.3 +/- 1.3	6,5 +/- 0.5	6.7 +/- 1.1	6.9 +/- 0.8	4.9 +/- 2.5
S3	9	7.4 +/- 6.5	3.9 +/- 1.4	5.8 +/- 1.2	6.2 +/-1.1	6.3 +/-1,2	4.7 +/-1.7
S4	2	6.9 +/- 5.3	4.9 +/- 1.3	6.3 +/- 0.9	6.1 +/- 0.73	6.55 +/- 0.30	5.6 +/- 1.3
S5	2	10.1 +/-6.9	3.5 +/- 1.5	5.5 +/- 1.3	5.4 +/- 1.7	5.5 +/- 1.6	4.2 +/- 1.9
Totalité	34	7.3 +/- 5.5	4.3 +/- 1.4	6.2 +/- 1	6.18 +/- 1.1	6.39 +/- 0.9	5.02 +/- 1.82

Table 2. Correlations between parental quality of life and disease severity, disease duration, and age of the child with peladic disease

Category	Average FDLQI score	Score QLCCDQ Emotional domain
SALT score	0.65	-0.36
Duration of the disease	0.06	-0.14
Age of the child	-0.02	-0.21

No correlation was found between parental QoL and duration of disease progression. Ghajarzadeh et al found no association between disease duration and DLQI score [8]. We found no significant correlation between disease duration and parents' overall QoL. Patient age correlated with parents' overall QLCCDQ scores but not on the FDLQI (Table 2).

These results suggest that the challenges parents face do not diminish, although they may adjust psychologically to the child's diagnosis over time.

5. Conclusion

Our study demonstrates the negative impact of alopecia areata on the quality of life of parents of affected children especially in the emotional domain. The impairment of the patients' quality of life was mainly influenced by the severity of the disease and the age of the affected child, but not by the duration of the disease.

The efficacy of any treatment for alopecia areata should be judged also on the improvement of quality of life and not only on hair regrowth. Better examination of this relationship could help guide disease management and allow clinicians to tailor support for patients and their parents. Interventional studies such as psychoeducation, psychotherapeutic interventions and counseling to reduce the impact of the disease may be warranted.

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