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Health-Related Quality of Life Assessment in Egyptian Children with Atopic Dermatitis

Thesis

Submitted for Partial Fulfilment of a Master Degree in **Pediatrics**

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Abb.	Full term
AD	Atopic dermatitis
ADD	Attention-deficit disorder
<i>ADHD</i>	Attention deficit hyperactivity disorder
CDLQI	Children's Dermatology Life Quality Index
DBH	Dampness in buildings and health
FA	Food allergy
FDLQI	Family Dermatology Life Quality Index
HRQOL	Health related quality of life
<i>NA</i>	Non applicable
PKU	Phenylketonuria
QOL	Quality of life
SD	Standard deviation
SPSS	Statistical Package for Social Science
<i>UKWP</i>	United Kingdom Working Party

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Introduction

Atopic dermatitis (AD) is a chronic inflammatory multifactorial etiology, dermatosis of characterized pruritus. This condition moderate-to-intense evolves to outbreaks, and has a hereditary allergic character. In the past three decades, the number of patients with AD has doubled - or even tripled - in most parts of the world, constituting a major public health problem, especially industrialized in countries (Watson and Kapur, 2011; Pérez et al., 2012).

Skin conditions have a negative impact on emotional status, on social relationships and on daily activities. Chronic pruritus is often untreatable, so, it has a major impact on the QOL of the patient, since it is negative for the quality of sleep, affecting children's behavior by day as well as their productivity. There is also the social, emotional, and financial impact on the patients' families. Parents of the affected children report difficulties in discipline and care of their children, generating conflict between parents and healthy children, thus changing the family structure (Alvarenga and Caldeira, 2009; Grundmann and Ständer, 2011; Slattery et al., 2011; Hong et al., 2012).

Although AD is associated with physical comorbidities, such as other atopic diseases like allergic rhinitis and asthma, and metabolic syndrome, there is an under appreciation of the associated psychiatric comorbidities, particularly depression and suicidality, defined here as suicidal ideation and attempted

or completed suicide. Although many dermatological diseases have been linked to psychiatric comorbidities, patients with atopic dermatitis were noted 50 years ago to have a characteristic psychological profile, one high in anxiety and depression, that differs from patients with other cutaneous diseases (Lee et al., 2017; Radtke et al., 2017).

A number of potential theories exist as to why patients with AD have a higher risk of psychiatric illness. First, it is possible that these changes in inflammatory markers are what contribute to psychiatric illness in patients; second there is a well-known link between sleep disturbance and depression in the general population. A number of studies show an increase in sleep disturbances in patients with AD compared to nonatopic patients, which may contribute to an increased risk of depression. Third, purities is a major symptom of AD. It is known that depression and even suicidal ideation in AD are associated with itch, and increasing severity of itch is associated with increasing severity of depression (Tsuno et al., 2005; Chang et al., 2014; Halvorsen et al., 2014; Schut et al., 2015; Kong et al., 2016).

Aim of the Work

This work aimed at measuring, through validated questionnaires, the impact of AD on the quality of life of children and their parents and/or caregivers. The ultimate objective is to alleviate morbidity in these children and help them lead a normal life.

Chapter 1

ATOPIC DERMATITIS

Atopic dermatitis (AD) is a chronic inflammatory skin disorder that is characterized by dry skin and recurrent flares of a pruritic eczematous rash. This disease is most prevalent in young children, especially in those with a genetic pre-disposition toward atopic disease (Mastrorilli et al., 2017).

Epidemiology:

Atopic dermatitis (AD) is the most common chronic inflammatory disorder of the skin in children. Although not life-threatening, AD hugely alters quality of life due to pruritus that may constitute a disabling condition affecting sleep as well as daily or social activities (Blome et al., 2016). Furthermore, the financial burden of the disease should not be underestimated: for example, in the United Kingdom, AD costs the healthcare system around £125 million annually (Sach et al., 2016).

Evidence from the ISAAC Study and other population-based cohorts shows that AD affects more than 20% of children in industrialized countries (Flohr et al., 2014). Although primarily defined by clinical criteria (Kennedy et al., 2017), it is recognized that AD is a complex disease with multiple causes and complex mechanistic pathways according to age of onset, severity of the illness, ethnic modifiers,

response to therapy, and triggers (including infections, allergens, stress, and irritants). Approximately one-third of patients with AD have sensitization to allergens (Flohr et al., 2014). Most infants who present with mild AD will outgrow their skin disease later in life, and overall less than 5% of childhood AD will persist into adulthood (Flohr et al., 2014). However, a group of difficult-to-manage patients with early-onset and severe lifelong AD associated with allergic asthma and/or food allergy (FA) has been identified

-Definitions of AD:

The United Kingdom Working Party (UKWP) defined the following diagnostic criteria for clinical research: "AD is an itchy skin disease (located on bending folds in children older than 4 years, or on limb convexities, cheeks and forehead in younger children), accompanied by xerosis, and a personal or familial history of atopy" (Kennedy et al., 2017). They constitute a refinement of the Hanifin and Rajka diagnostic criteria, developed in the 1980s, which defined AD as having at least 3 of the following criteria: pruritus, lichenification, a chronically relapsing course, personal, or familial history of atopy (Hanifin and Rajka, 1980).

A multidisciplinary team of experts defined AD as a chronic, relapsing, non-contagious, pruritic inflammatory skin disease that occurs more commonly in children. AD is often, but not exclusively, associated with allergenic sensitization