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ROLE OF NURSES IN THE MANAGEMENT OF ATOPIC DERMATITIS ALSO KNOWN AS ATOPIC ECZEMA- A REVIEW STUDY

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Abstract:

Background: *The aim of this study is to acknowledge and patronize the critical role of nurse in the management of atopic dermatitis. The nurses can take a leap forward understanding the pathophysiology, etiology, risk factors, management and can also support their colleagues and patients to help maintain the desired quality of life with the disease.* ***Main Body:*** *Atopic dermatitis is a chronic, inflammatory disease of skin characterized by erythematous lesions accompanied by scaling and intense itching. It has a cyclic course with remissions and relapses of varying intensities thus posing a constant stress to the patient and the family. Nurses being the part of the multidisciplinary team can play their role in patient education and implementing the treatment plan to bring substantial drift in the disease outcome and quality of life of the patients.* ***Conclusions:*** *Nurses play a critical role in the identification and management of atopic dermatitis. They are the part of the patient centered multidisciplinary approach and can engage the physicians and the patients for the optimization of the treatment response by providing relevant knowledge and outline regarding precautions, adherence and follow-up.*

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BACKGROUND:

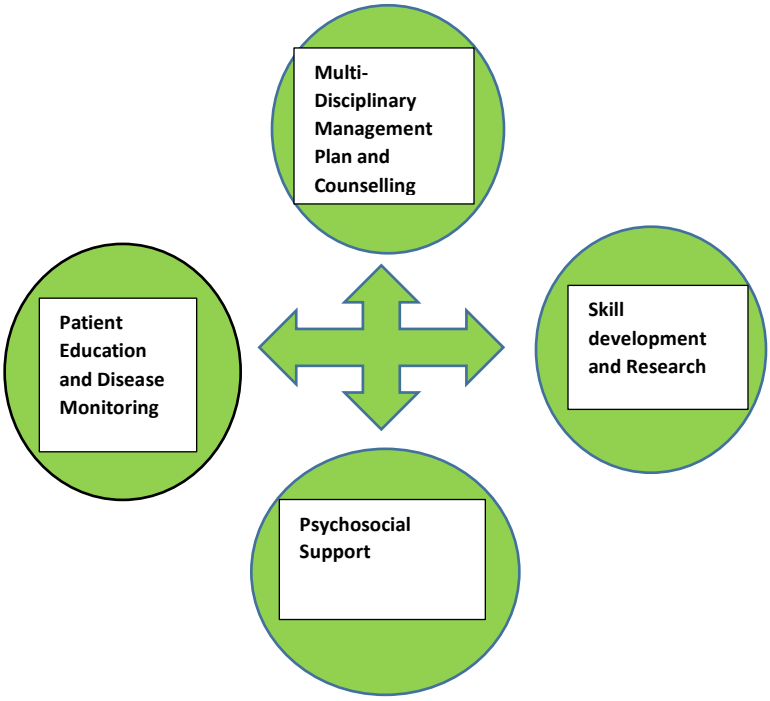
Atopic dermatitis is an inflammatory disease of skin characterized by erythematous lesions accompanied by scaling and intense rash [1]. It has a complex multifactorial etiology involving the interplay of genetic, environmental, and immunological factors. Due to a genetic modification in the lipid metabolism pathway there occurs a breakdown in the epidermal barrier exposing to the immune mediated response against allergens leading to dehydration and inflammation. AD manifestations commonly occur in infancy or early childhood in 20-30% of the cases. [2–5]. 80% of patients have an atopic/ allergic background causing the intrinsic atopic dermatitis [6]. Onset of AD has a predictive affiliation with the development of asthma, conjunctivitis, angioedema and food allergies in later part of lives [7]. Similarly the prevalence of cardiovascular, autoimmune, and psychiatric diseases is common among the sufferers [8, 9]. The constant stimulus to itch creates a substantial impact on quality of life [10–13].

MAIN BODY:

The disease has a cyclic course with periodic remissions and relapses of varying intensity [2]. Therefore the treatment is aimed to mitigate the flare, address the chronic symptomatology and alleviate the super added infection [14, 15]. The complete management protocol is beyond the scope of this paper. Therefore we have only highlighted the salient aspects which can serve as stepping stones for the role of nurses involved in the care patients with AD.

The purpose of this article is to provide a comprehensive overview of the main aspects regarding the management of atopic dermatitis also known as atopic eczema.

Fig.1 Role of nurses in the management of atopic dermatitis.



DISCUSSION:

The role of the nurse in the patient-centered care team AD disease management has many tiers involving primary, secondary and tertiary care provision according to the disease severity warranting outpatient, inpatient and intensive care respectively [14], [16], [23]. (Fig.1) Nurses are bound to develop good rapport and empathetic attitude while managing patients [24]. Therefore due to the nature of their job they can take to develop the patient centered care utilizing the multidisciplinary model in which information, education, and treatment is tailored according to the shared decision making following the ideas, concerns and expectations of each patient. [25]

The atopic dermatitis is usually diagnosed on family/personal history and clinical features the major criteria include dry skin with/without erythema, induration, and scaling, pruritus and a personal or family history of allergic skin or a respiratory disease such as asthma/ rhinitis/conjunctivitis with the onset mostly below 2 years of age [29, 30]. Therefore nurses can play there role in the identification of environmental triggers which can cause flare of immune responses. The treatment strategies are based on disease severity and therapeutic response [14, 15, 25].

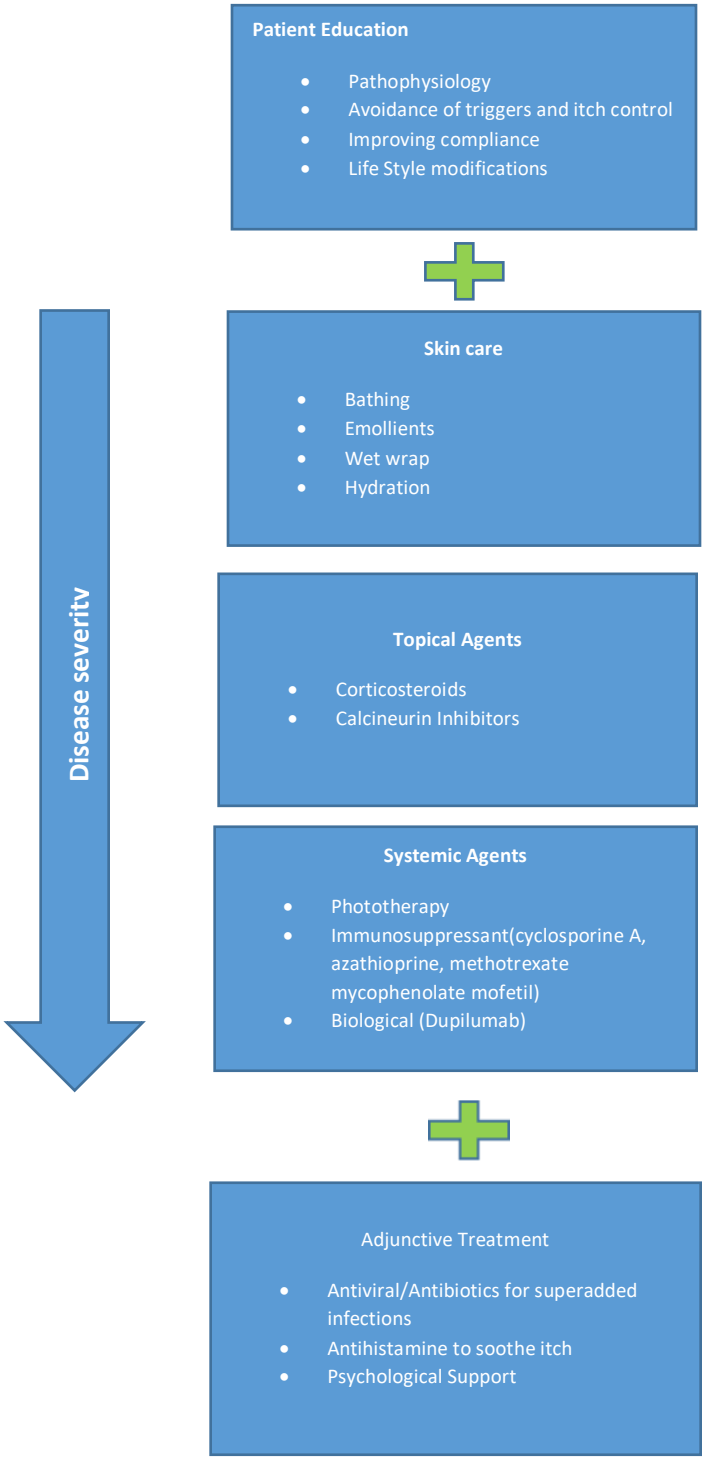
Since AD is characterized by remissions and exacerbations therefore various clinical tools and scoring systems have been developed to quantify the severity of the disease subjectively such as the Scoring Atopic Dermatitis Index (SCORAD) – with clinical and patient-oriented versions (PO-SCORAD), Eczema Area and Severity Index (EASI), Patient Oriented Eczema Measure (POEM) and more generic dermatology-focused tools such as the Dermatology Life Quality Index (DLQI) [31–36]. Although these tools have less clinical significance therefore the nurses can contribute to the objective assessment to inform disease management and decisions about treatment and its evaluation.

The principles of treatment for moderate to severe AD are based on 4 pillars; (1) identification and avoidance of trigger factors; (2) skin rehydration to prevent epidermal breakdown and restore natural barrier; (3) alleviate itching; (4) reducing skin soreness and combating inflammation via topical and systemic remedies. A nurse working in dermatology should be adept in patient education and support in above mentioned aspects. Well-recognized irritants include fabrics such as acrylic or wool, household chemicals (bleach or solvents), and fragrances. Daily use of emollients to reduce moisture loss is the mainstay of treatment. This has been shown to reduce pruritus and may also have a steroid sparing effect, reducing the amount of topical corticosteroids (TCS) required [14, 37–39]. (Fig. 2) Dermatology nurse specialists trained in AD management have a good knowledge of available products and are skilled in providing advice to patients who have difficulty in finding an emollient regime that suits their individual needs and preferences. Wet-wrap therapy is particularly more useful in adjunct to standard skincare and topical therapies especially in children to alleviate them from pruritus [41–44].

Medical therapies include topical corticosteroids (TCS) or topical calcineurin inhibitors (TCIs), phototherapy and systemic or biologic agents (immunosuppressive or biologic therapies e.g. dupilumab). Evidence based guidelines recommend a step up approach to agent selection with a range of topical agents being considered as first-line before systemic immunosuppressive or biologic therapies are considered [14, 15, 25–28]. TCS are generally considered safe and preferable over [45, 46].

Nurses are also involved in administering phototherapy according to the established protocols. Patients with moderate-to severe AD may require systemic therapy with immunosuppressant (cyclosporine A, azathioprine, methotrexate, and mycophenolate mofetil) can benefit from targeted biologics such as dupilumab. There exists a strong correlation between the atopic dermatitis and several metabolic diseases such a cardiovascular, autoimmune and psychiatric [8, 9]. Nurses can play their role in educating clients regarding adopting healthy lifestyles and eating habits such as brisk walk, smoking cessation and alcohol abstinence. All the suspects should be vaccinated according to the EPI schedule [9]. Nurses are most suited to arrange counselling sessions for the patients and their families to motivate them to strict comply with the management goals. Nurses often play a primary role in providing evidence-based and patient centered information to promote active participation in shared decision making in the context of holistic medicine [20, 50–54]. Nurses can draft examples from the successfully managed patients and arrange sessions with the active disease fighters so that they can learn to adopt from their fellow colleagues. Similarly the use of social media apps for E-Health and Telemedicine can outreach and connect the patients across the globe on a universal platform for latest developments and management plans. [70-81].

Fig.2 Flowchart for the management of Atopic Dermatitis



CONCLUSIONS

Nurses working in the dermatology domain remain a prime force in the assessment and management of patients with atopic dermatitis. They have a critical role in the multidisciplinary approach to develop long-term relationships with patients and their families. The

purpose of this connection is to develop a shared decision making for a management plan addressing the ideas, concern and expectations of the patients keeping in view the available resources. Mobilization of the social and emotional support as well as disease education and patient tailored practical advice may pave the way for a better clinical outcome and quality of life. It is imperative for the nursing staff to adopt to the changing trends of distant patient care via information technology tools for the provision patient care for the disease management of atopic dermatitis.

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