

FREQUENCY OF XEROSIS IN CHILDREN PRESENTING WITH CHRONIC PRURITUS

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ABSTRACT:

OBJECTIVES:

To determine the frequency of Xerosis in children presenting with chronic pruritus to Hayatabad Medical Complex Peshawar, Khyber Pakhtunkhwa, Pakistan and compare it with national and international data.

METHODOLOGY:

This was a cross sectional study, carried out in the Department of Dermatology, Hayat Abad Medical Complex Peshawar from 24th May 2020 till 24th November 2020. All patients of either gender with age range up to 13 years, presenting with chronic pruritus were enrolled for this study. All the findings were recorded on a preformed proforma and results were compiled and tabulated.

RESULTS:

Out of 136 patients presenting with chronic pruritus, 75 were male (55.1%) and 61 (44.9%) were female. 85 (62.5%) patients were having dry skin (Xerosis) while 37.5% were having normal skin.

CONCLUSION:

Xerosis is a common and under diagnosed skin condition commonly associated with chronic pruritus and screening all children for Xerosis is simple measures to improve quality of life of affected children.

KEYWORDS: Xerosis, Chronic Pruritus, Children

How to cite this article:

Naz S, Riaz S, Khan FA, Zahoor H, Suhail M, Nadeem A. Frequency of Xerosis in Children Presenting with Chronic Pruritus. J Gandhara Med Dent Sci. 2021;8(3): 25-28
DOI: <https://doi.org/10.37762/jgmids.8-3.191>

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INTRODUCTION:

Pruritus is an unpleasant sensation that

causes the desire or reflex to scratch¹. It can be either acute or chronic, depending on duration, if lasting more than six weeks it is known as chronic pruritus (CP)¹. Patients who presents with pruritus may have a variety of underlying conditions both dermatological and non-dermatological². Chronic pruritus can arise as a result of variety of causes including systemic diseases, dermatological diseases and drugs³. The most frequent dermatological disease occurring in children with chronic pruritus atopic dermatitis⁴. Other causes of pruritus in children are iron deficiency, polymorphic light eruption, psoriasis, mastocytosis, urticarial, bacterial and viral infections, untreated scabies, pediculosis and

insect bites⁴. Xerosis (dry skin) tends to worsen during winter season, heaters, electric blankets, air condition and frequent use of soaps, and detergents⁵. Xerosis may also be a manifestation of atopic dermatitis which ranks 8th among the globally prevalent top 50 skin diseases⁶. Physical and psychological stress associated with pruritus, skin scratches, sleep disturbance and visible skin changes all contribute to severe morbidity and family life disturbances^{7, 8}. Avoidance of overuse of these aggravating factors in addition to frequent emollient use can treat Xerosis and hence chronic pruritus⁵. Comprehensive history of the patient's disease, family history, recognized trigger factors, home environment, etc. must be taken. Examination should include an assessment of the whole skin to assess severity, complications and co-morbidities and impact on the patient's quality of life^{9, 10}. Most crucial step in management of Xerosis comprises patient and family education, advice on the reduction of trigger factors, use of bathing/showering with emollients, regular emollient application and suppression of inflammation with a topical corticosteroid to induce remission only if needed. Emollients should be used continuously during remission and in more severe cases use of topical anti-inflammatory therapy will be valuable to reduce the frequency of flares. Although quite effective and safe but adherence to the regimen can be difficult⁹.

METHODOLOGY:

Approval for research project was taken from hospital ethical committee. Written informed consent was taken from parents or attendants of children who fulfilled inclusion criterion. This was a cross sectional study and consecutive, non-probability sampling technique was adopted for this study. Patients of either gender with age range 0 to 13 years, presenting with pruritus for more than 6 weeks were enrolled for this study. Patients presenting with pruritus of duration less than 6 weeks were excluded from this study. Data was entered on a preformed proforma. Statistical analyses of data obtained were carried out with SPSS version 21. Frequencies and percentages were calculated for variables, results were compiled in the form of tables and figures.

RESULTS:

A total of 136 children aged 0-13 years presenting with chronic pruritus were enrolled for this study while children presenting with pruritus of less than 6 weeks or having pruritus of more than 6 weeks but older than 13 years were not included in study. Out of 136, 75 (55.1%) were male and 61 (44.9%) were female (Table 1). Xerosis (dry skin) was present in 85 (62.5%) children out of 136 and absent in 51 (37.5%) giving statistically significant results (Table 2).

Table 1: Gender Wise Distribution

Gender	Frequency	Percentage
Male	75	55.1%
Female	61	44.9%
Total	136	100%

Table 2: Frequency of Xerosis in Chronic Pruritus in Children

Xerosis Present	Total=136
Yes	85 (62.5%)
No	51 (37.5%)

DISCUSSION:

Dry skin is a common manifestation in childhood. In present study more than 50% of children with chronic pruritus were having history of dry skin. Almost similar results were seen in a study where 98% of patients were having dry skin¹¹. A Swedish study reported Xerosis in up to 82% of atopic children having chronic pruritus, thus dry skin can be the presentation of childhood atopic dermatitis¹². This difference in results of these studies might be due to the differences in subjective assessment of Xerosis by different researchers and not using a single universal tool for objective assessment of Xerosis in different studies and racial or geographical differences of study population^{12, 13}. The other plausible reason for disparity between these results may be due to racial or geographical differences of study population¹⁴. A study conducted in Egypt found that 11.8% of the subjects had xerosis¹⁵. The incidence of

dermatoses diseases in india were 72.1% and among them 32.63% suffered from xerosis¹⁶. Xerosis also presents as common manifestation of atopic dermatitis. Research shows that the physical impact of childhood atopic eczema varies with severity of the disease. Physical discomfort may also lead to significant impact on the child's emotional and social development with long-term implications like depression, anxiety, impaired school performance leading to lack of confidence and impaired quality of life¹⁷. So, identification and management of Xerosis at early stage can decrease the impairment of quality of life¹⁸.

CONCLUSION:

Xerosis is a common and under diagnosed skin condition commonly associated with chronic pruritus. It will be fruitful and cost effective to screen all children presenting with chronic pruritus to look for Xerosis and treat it effectively with proper and simple measures to improve quality of life of affected children.

CONFLICT OF INTEREST: None

FUNDING SOURCES: None

REFERENCES:

- Oliveira C, Torres T. More than skin deep: the systemic nature of atopic dermatitis. *Eur J Dermatol.* 2019; 29(3):250-8.
- Yosipovitch G, Ständer S, Kerby MB, Larrick JW, Perlman AJ, Schnipper EF, et, al Serlopitant for the treatment of chronic pruritus: results of a randomized, multicenter, placebo-controlled phase 2 clinical trial. *J Amer Acad Dermatol* 2018 May 1;78(5):882-91.
- Kinoshita-Ise M, Shear NH. Diagnostic and therapeutic approach to scalp dysesthesia: a case series and published work review. *The J of dermatol.* 2019 ; 46(6): 526-30.
- Abasq-Thomas C, Gréco M, Misery L. Pruritus in Children. In: Misery L, Ständer S, editors. *Pruritus*. 2nd ed. London: Springer International Publishing; 2016. p. 453
- Australasian Society of Clinical Immunology and Allergy. *Eczema (Atopic Dermatitis)* [Internet]. Australia: Australasian Society of Clinical Immunology and Allergy; 2010. Available from: www.allergy.org.health-professionals/hp-information/asthma-and-allergy/atopic-dermatitis
- Kayarkatte MN, Singal A, Pandhi D. Impact of Onychomycosis on the Quality of Life: Dermatology Life Quality Index-Based Cross-Sectional Study. *Skin appendage disorders.* 2020;6(2):115-9.
- Adamson AS. The economics burden of atopic dermatitis. *Management of Atopic Dermatitis.* 2017:79-92.
- Fortson EA, Feldman SR, Strowd LC. *Management of Atopic Dermatitis.* Cham (Switzerland): Springer. 2017:25-30.
- Kowalska-Oleđzka E, Czarnecka M, Baran A. Epidemiology of atopic dermatitis in Europe. *J drug assess.* 2019 1;8(1):126 -8.
- Thyssen JP, Andersen Y, Halling AS, Williams HC, Egeberg A. Strengths and limitations of the United Kingdom Working Party criteria for atopic dermatitis in adults. *Journal of the Euro Acad Dermatol and Venereology.* 2020 ;34(8):1764-72.
- Fuxench ZC, Block JK, Boguniewicz M, Boyle J, Fonacier L, Gelfand JM, Grayson MH, Margolis DJ, Mitchell L, Silverberg JI, Schwartz L. Atopic Dermatitis in America Study: a cross-sectional study examining the prevalence and disease burden of atopic dermatitis in the US adult population. *J investigative Dermatol* 2019;139(3):583 - 90.
- Yew YW, Thyssen JP, Silverberg JI. A systematic review and meta-analysis of the regional and age-related differences in atopic dermatitis clinical characteristics. *Journal of the Am Acad of Dermatol.* 2019 ;80(2) 390-401.
- Lin B, Dai R, Lu L, Fan X, Yu Y.

- Breastfeeding and atopic dermatitis risk: a systematic review and meta-analysis of prospective cohort studies. *Dermatology*. 2020;236(4):345-60.
14. Lee-Wong M, Chou V, Karagic M, Gomez S, Moqattash L, Silverberg NB, et al. Prevalence of atopic disorders in inner city Asians Americans and the predictive value of family history. *J Allergy Ther*. 2013;4(1):1-3.
 15. Abdallah I, Hussein O, Abdelmagid A. Epidemiological Study of Vitiligo in Damanhour Teaching Hospital. *Benha Med J*. 2020 ;37(1):297-304.
 16. Upendra Y, Sendur S, Keswani N, Pallava A. Prevalence of dermatoses among the tribal children studying in residential schools of South Chhattisgarh, India. *Indian Journal of Paediatric Dermatology*. 2018 Jan 1;19(1):15.
 17. Katata Y, Inoue SI, Asao A, Kobayashi S, Terui H, Inoue-Shibui A, et al Costello syndrome model mice with a Hras G12S mutation are susceptible to develop house dust mite-induced atopic dermatitis. *Cell Death & Dis*. 2020 ;11(8):1-5.
 18. LePoidevin LM, Lee DE, Shi VY. A comparison of international management guidelines for atopic dermatitis. *Pediatr dermatol*. 2019;36(1):36 -65.

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