

Dermatology Literary Review

January 2022 to March 2022

Title	Publication	Date	Overview
Effects of an emollient application on newborn skin from birth for prevention of atopic dermatitis: a randomized controlled study in Thai neonates	Journal of the European Academy of Dermatology & Venereology, Vol. 36, No. 1, pages 76-83.	January	A randomised controlled study in Thailand found that applying emollients during infancy can prevent atopic dermatitis (AD) in high-risk neonates in a country with a tropical climate. Eligible neonates were randomly assigned to receive either emollient and skincare advice (emollient group) or skincare advice only (control group). The intervention was started within 3 weeks of birth. The emollient group showed a significant reduction in the cumulative incidence of AD at 6 months (relative risk, 0.39; 95% CI 0.24–0.64; $P < 0.001$). The emollient group also started to develop AD later and had a lower severity of AD than the control group ($P < 0.001$). However, the optimal frequency of applying emollients for the prevention of AD in this population was 'as needed', depending on environmental factors and level of skin dryness, rather than daily routine application.
The skin and associated disorders	British Journal of Nursing, Vol. 31, No. 4, pages 202-206.	24 February	Article reviews the anatomy and physiology of the skin and discusses common skin disorders including psoriasis and atopic dermatitis. It recommends that a detailed history of the patient's skin condition, a general assessment of the patient, an assessment of the patient's knowledge and a physical assessment should be carried out and documented using the correct terminology for the type of skin disorder and lesions the patient presents with. It also discusses management of skin conditions including topical creams, emollients and antibiotics. Although most skin disorders are mild some can require urgent medical assistance due to the severity.
Burns with emollients	The BMJ, Vol. 376, No. 8327, pages 326-327.	26 February	Article discusses the risk factors associated with burns and emollient use, and gives recommendations of how the risk of harm can be minimised. It suggests that patients should be advised to continue using emollients as they are important, effective treatments with no alternative. However, it is important for patients to be aware that whilst emollients are not flammable themselves, when impregnated into fabric, they can act as an accelerant. It is therefore recommended that patients avoid naked flames, stop smoking and take precautions such as avoiding wearing long sleeved or loose clothing when cooking.

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Clinical manifestations, proposed mechanisms, and updated management of severe atopic dermatitis and associated pruritus	Journal of the Dermatology Nurses' Association, Vol. 14, No. 1, pages 20-27.	January/ February	Article describes some of the common clinical manifestations of atopic dermatitis (AD) and explores hypothesised mechanisms. It suggests that although family history strongly predisposes patients to AD, many of the underlying mechanisms that lead to AD are still unknown. It explores how recent therapeutic attention has turned toward targeting the specific pathways involved in AD, which it suggests is promising for future therapeutic success for patients. Current therapeutic treatment options for patients with AD are also discussed, including anti-inflammatory agents such as topical corticosteroids and the use of emollients to decrease barrier dysfunction. It suggests that barrier protection with creams alone can reduce AD symptoms in those as young as 3 months old and how when paired together, emollients and topical steroid medications synergistically and significantly reduce AD symptoms, specifically pruritus. After maximising topical approaches, systemic therapies are then recommended to further reduce inflammation and itch associated with AD.
COVID-19 and skin diseases: results from a survey of 843 patients with atopic dermatitis, psoriasis, vitiligo and chronic urticaria	Journal of the European Academy of Dermatology & Venereology, Vol. 36, COVID-19 Special Forum, pages e1-e3.	January	Results from a survey found that the severity of COVID-19 did not differ among patients with atopic dermatitis (AD), chronic urticaria (CU), psoriasis and vitiligo, but acute COVID-19 and its treatments can affect the course of skin diseases. Between May and June 2021, a total of 6,614 confirmed COVID-19 cases were analysed, and of these, 843 reported one of the four active skin diseases. Hospitalisation due to COVID-19 did not differ between respondents with skin diseases (9%) and without skin diseases (11%) ($P = 0.168$). Regarding symptoms reported during COVID-19, high fever was associated with the exacerbation of CU and severe dyspnoea was associated with the worsening of AD lesions and of arthralgia in psoriasis. Oral corticosteroids for the treatment of CU and vitiligo led to greater clinical impairment, as did the use of antihistamines for AD. Systemic therapies, such as methotrexate and biologics (for AD, psoriasis and CU), did not exhibit a detectable effect on COVID-19. Disease flares were identified in about one quarter of patients with psoriasis following COVID-19.

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Skin assessment in adults	British Journal of Nursing, Vol. 31, No. 5, pages 274-278.	10 March	Article discusses the importance of regular skin assessments to reduce the risk of pressure damage and skin tears. It explores skin hygiene and recommends the use of emollients and soap substitutes to help promote skin health, reduce dryness and improve symptoms of itching and tightness. It suggests that the use of emollients applied twice daily is also a key part in the prevention of skin tears and superficial pressure ulcers.
Natural moisturizing factors in children with and without eczema: associations with lifestyle and genetic factors	Journal of the European Academy of Dermatology & Venereology, Vol. 36, No. 2, pages 255-262.	February	A case-control study has found that natural moisturising factors (NMF) levels were significantly lower in atopic dermatitis (AD) participants compared to healthy controls (HC) ($P < 0.001$). This significance persisted after stratifying for AD subgroups of present AD, current AD during the last year and previous AD ($P < 0.001$, $P = 0.039$, $P = 0.009$ respectively). There was a significant association between NMF and genotyping for filaggrin genotype ($P = 0.016$, $P = 0.002$ for HC, AD respectively). The study also found significant inverse associations for early age moisturiser use (<18 months of age) and NMF levels in HC, with a similar non-significant trend in early use and duration of use with NMF levels in the AD participants. The study did not find any significant associations with NMF levels and exposure to cats, dogs and antibiotics in the first years, nor with steroids used in the last 12 months, for HC or AD participants.
Itch: pathogenesis and treatment	Journal of the American Academy of Dermatology, Vol. 86, No. 1, pages 17-34.	January	Article discusses the pathophysiology of itch and outlines treatment options which can be tailored to individual patients. Itch is classified into histaminergic and nonhistaminergic pathways. Itch sensation is primarily transmitted by unmyelinated type C and thinly myelinated type Ad nerve fibres in the skin. The itch signalling cascade involves bidirectional neural circuitry connecting the skin, spinal cord and brain. Crosstalk between the neural and immune systems modulates itch transmission. Itch management requires clinical phenotyping into etiologic subtypes with varying degrees of inflammatory, systemic, neurologic and psychologic dysfunction. Effective itch therapies often modulate both neural and immune components of itch transmission. Recalcitrant itch often requires combination multimodal therapy with both topical and systemic agents.

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Biologics for pediatric psoriasis: a systematic review and meta-analysis	Pediatric Dermatology, Vol. 39, No. 1, pages 42-48.	January-February	Results from this systematic review and meta-analysis of randomised control trials (RCTs) provide a compelling argument for the use of biologic therapy in paediatric patients with moderate-to-severe psoriasis. Biologics were found to be a highly efficacious therapy with a good safety profile at initial follow-up of 12-16 weeks. Five RCTs assessing adalimumab, etanercept, ixekizumab, secukinumab, and ustekinumab were included (768 patients). The odds ratio of achieving a 75% improvement in Psoriasis Area and Severity index score was 12.37 (95% CI: 6.23-24.55) at initial follow-up (12-16 weeks of treatment). Of the patients included in the meta-analysis, only one experienced a serious adverse event (an accidental overdose). There was an overall good safety profile at initial follow-up.
Mixed evidence on the relationship between socioeconomic position and atopic dermatitis: a systematic review	Journal of the American Academy of Dermatology, Vol. 86, No. 2, pages 399-405.	February	Article discusses how a number of studies, and a prior systematic review, reported a positive association between atopic dermatitis (AD) and socioeconomic position. However, in contrast to this, this updated systematic review has found that a majority (58%) of studies did not find a positive association between AD and socioeconomic position. Of the 88 studies, 15% (13) found a negative association and 43% (38) found a null or inconsistent association between AD and socioeconomic position. The authors suggest that given that AD affects up to 1 in 5 children worldwide, these results highlight the importance of additional research into the impact of social influences and disparities on the severity and activity of AD disease across a life span.
Identifying the best predictive diagnostic criteria for psoriasis in children (< 18 years): a UK multicentre case-control diagnostic accuracy study (DIPSOC study)	British Journal of Dermatology, Vol. 186, No. 2, pages 341-351.	February	Article discusses how psoriasis can be challenging to diagnose in children, with clear differences in the clinical presentation compared with adults. It shares the results of a study which provides history- and examination-based data on the clinical features of psoriasis in children and proposes seven diagnostic criteria with good discriminatory ability in secondary-care patients. The presence of two or more of these criteria had a sensitivity and specificity of over 70%. Three of the best predictive criteria involve skin in hidden sites which are often covered by clothing or hair. These criteria will therefore be helpful to prompt examination of these specific areas to determine whether a patient has psoriasis or not.

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