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Still not fully understood – the history of atopic dermatitis

Wciąż nie do końca odkryta – historia atopowego zapalenia skóry

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Atopic dermatitis (AD) is a chronic, inflammatory skin disease that most often begins in childhood and may coexist with other atopic diseases (food allergies, bronchial asthma, allergic rhinitis). Eczematous skin lesions with age-related location, accompanied by intense pruritus and lichenification are the most characteristic features. Atopic dermatitis has a long-term, recurrent course with periods of exacerbations and remissions. The etiopathogenesis of the diseases is not fully understood. Environmental, genetic and immune factors that lead to skin barrier damage and excessive inflammatory response, are involved[1]. Th2 cells and keratinocytes, along with additional cytokines such as IL-4, IL-5, IL-25 or thymic stromal lymphopoietin (TSLP) seem to play the leading role in this process[2].

Atopic dermatitis causes great therapeutic difficulties. However, the introduction of topical glucocorticosteroids (1952)[3] and calcineurin inhibitors (1994)[4] was a therapeutic breakthrough. Significant progress has also been made in the general treatment in recent decades. Cyclosporin A therapy was first introduced in 1991[5], followed by methotrexate in 2003[6]. Reports on the efficacy of azathioprine in the treatment of AD date back to 1978, but it still remains off-label therapy[7].

Atopic dermatitis is currently one of the most common dermatoses, and the first mention of it probably dates back to the reign of Emperor Octavian Augustus[8]. Since then, the understanding and treatment of this disorder has greatly advanced. Among others, Jean-Louis-Marc Alibert (1768–1837) contributed to the development of knowledge about AD. The *Description of Skin Diseases* (French: *Description des maladies de la peau observées à l'hôpital Saint-Louis, et exposition des meilleures méthodes suivies pour leur traitement*) from 1806, which was first to include drawings of skin lesions along with the entire human silhouette, made him famous. King Louis XVIII of France appreciated the work so much that he appointed him court physician (later he also treated his successor – Charles X). For his actions he was honoured with the title of baron[9,10].

Thomas Bateman (1778–1821), born in Great Britain, began working in a hospital as a junior assistant physician at the age of 19 years. After completing medical studies, he moved to London, where, together with his teacher Robert Willan (1757–1812), he published the work entitled *A Practical Synopsis on Cutaneous Diseases* in 1813 to classify skin diseases depending on the morphology of the primary lesion (bladder, papule, pustule). Four years later, he published an atlas entitled *Delineations of Cutaneous Diseases*. In their work from 1816, Bateman and Willan described AD on the children's faces as *porrigolarvalis* (*porrigo* – ringworm, *larvalis* – resembling a ghost mask).

Ferdinand Ritter von Hebra is another important name in the history of AD (1816–1880). Hebra described in detail the morphology of skin lesions as well as subjective symptoms associated with this disease. He was first to point to pruritic lesions in AD. He described skin lesions on the trunk and limbs (especially on the side of the extensor muscles) as covered with scabs in the colour of blood. Hebra emphasised the importance of topical treatment of skin lesions with the use of emollients, tar and sulphur. He also recommended steam baths and baths in not very warm water up to five times a day. He considered distilled and rain water to be the most effective[11–13].

In 1923, Arthur Fernandez Coca (1875–1959) proposed a classification of skin hypersensitivity and introduced the concept of atopy. In 1933, Marion Baldur Sulzberger (1895–1983) together with Fred Wise, using the concept of atopy previously proposed by Coca, introduced the term "atopic dermatitis" for the first time[14]. Their description included the characteristic symptoms of this disorder, with particular attention paid to its connection with other atopic diseases, such as asthma or allergic rhinitis. In 1940, Sulzberger published a textbook entitled *Dermatologic Allergy*, the first work on the subject in the USA[15].

It is impossible to describe the contemporary history of AD without mentioning the characters of Jon Hanifin and Georg Rajka. The diagnostic criteria established by them

in 1980 are still the basis for the diagnosis of this disease in Poland[16].

The aetiopathogenesis of AD is complicated, not fully understood and poses a constant challenge for researchers around the world. Currently, despite such a rich medical history, the response to treatment varies greatly between patients, and despite many options, long-term remission is rarely achieved. The future of AD therapy seems to be personalised medicine, based on identifying the endotypes of the disease in individual patients and adjusting the appropriate treatment. Nevertheless, it is worth being aware that the knowledge available today is the result of a long history of research on AD, discoveries and achievements of many scientists.

Conflict of interest

The author does not declare any financial or personal links to other persons or organisations that could adversely affect the content of this publication or claim rights thereto.

References

1. Ständer S: Atopic dermatitis. N Engl J Med 2021; 384: 1136–1143.
2. Jaworek AK, Szafraniec K, Zuber Z et al.: Interleukin 25, thymic stromal lymphopoietin and house dust mites in pathogenesis of atopic dermatitis. J Physiol Pharmacol 2020; 71. DOI: 10.26402/jpp.2020.2.14.
3. Sulzberger MB, Witten VH: The effect of topically applied compound F in selected dermatoses. J Invest Dermatol 1952; 19: 101–102.
4. Nakagawa H, Etoh T, Ishibashi Y et al.: Tacrolimus ointment for atopic dermatitis. Lancet 1994; 344: 883.
5. Sowden JM, Berth-Jones J, Ross JS et al.: Double-blind, controlled, crossover study of cyclosporin in adults with severe refractory atopic dermatitis. Lancet 1991; 338: 137–140.
6. Ellis C, Luger T, Abeck D et al.; ICCAD II Faculty: International Consensus Conference on Atopic Dermatitis II (ICCAD II): clinical update and current treatment strategies. Br J Dermatol 2003; 148 Suppl 63: 3–10.
7. Morrison JG, Schulz EJ: Treatment of eczema with cyclophosphamide and azathioprine. Br J Dermatol 1978; 98: 203–207.
8. Polańska A, Jenerowicz D: [Historical overview of selected issues related to the pathogenesis and treatment of atopic dermatitis]. Now Lek 2008; 77: 382–384.
9. Everett MA: Jean Louis Alibert. The father of French dermatology. Int J Dermatol 1984; 23: 351–356.
10. Taneja R, Maranda EL, Jarrett OG et al.: Jean Louis-Alibert – physician, teacher, pioneer. JAMA Dermatol 2016; 152: 1066.
11. Levell NJ: Thomas Bateman MD FLS 1778–1821. Br J Dermatol 2000; 143: 9–15.
12. Yang SH: Sigmund Freud and Moritz Kaposi: a resurfaced collision. Am J Dermatopathol 2015; 37: 805–807.
13. Wallach D, Coste J, Tilles G et al.: The first images of atopic dermatitis: an attempt at retrospective diagnosis in dermatology. J Am Acad Dermatol 2005; 53: 684–689.
14. Bhattacharya T, Strom MA, Lio PA: Historical perspectives on atopic dermatitis: eczema through the ages. Pediatr Dermatol 2016; 33: 375–379.
15. Hoffmann NY: Marion Sulzberger, MD: 'Mr. Dermatology'. JAMA 1983; 249: 1243, 1247–1249.
16. Hanifin JM, Rajka G: Diagnostic features of atopic dermatitis. Acta Derm Venereol Suppl (Stockh) 1980; 60: 44–47.