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バリア障害は難治性かゆみを誘導する

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An Epidermal Barrier Dysfunction Induces an Intractable Itch

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Abstract

Human skin consists of 2 kinds of barrier systems such as stratum corneum barrier and tight junction barrier in stratum granulosum. Stratum corneum barrier protects against the entry of harmful substances such as chemicals and microbes into the skin (outside to inside barrier), and it prevents excessive water loss from skin (inside to outside barrier). Activation of keratinocytes produce alarmin such as IL-33, TSLP and IL-25, and induce Th2 dominant inflammation. Th2 cells release Th2-cytokines such as IL-4, IL-13 and IL-31, and induce itch.

Barrier damages caused by environmental and genetic factors induce dry skin, alloknesis (sensitive skin) and intractable itch. Th2 cell-dominant immune responses and an elongation of nerve fibers into the epidermis causes an intractable itch which is resistant to the traditional treatments of itch. In this paper, an interaction between barrier dysfunction and intractable itch was discussed.

Key words: barrier dysfunction, stratum corneum barrier, tight junction barrier, intractable itch.