〈シンポジウム〉「基剤と添加物の役割」

軟 膏 基 剤 の 役 割

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Functional Features of Ointment Bases

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Abstract

With prerequisites of having no side-effects and no irritation of the skin, continued researches concerning the preparation of ointment bases are still made now for realizing the target to provide a sufficient stability of incorporated medicinal drugs during the time from preparation till application, and an easy applicability to the skin, as well as a high capability of a smooth release and penetration of active ingredients to the skin layers.

Generally, ointment bases and compositions are chosen through investigations concerning three important requirements; safety, effectiveness, and stability. The safety investigation is made through animal tests and human patchtest; however, the potentiality of cumulative insult dermatitis should be studied through a long-term tracing. Studies of the effectiveness are made through basic experiments on percutaneous absorption; however, final evaluation of an ointment base is made through clinical tests. The stability evaluation is made on the basis of the result from aging tests concerning chemical and physico-chemical properties. Recently developed ointment bases are frequently found to comprise surface active agents, which may accelerate the deterioration or may give influence upon the crystal growth of active components; it therefore is of importance to obtain full evidence for its optimum amount in the formula. In addition to the above, rheological properties, emollient effect and moisturizing effect of ointment bases can be pointed out as characteristic features influencing upon the quality of ointment bases. Discussion has been made here in this review concerning such functional features as those mentioned above, with full reference to research reports from pharmaceutical technologists and dermatologists.