

〈原 著〉

モルモット接触感作性試験の短期間試験法の検討(第2報) —サイクロフォスファミドの増強効果の検討—

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Studies of New Short Period Method for Delayed Contact Hypersensitivity Assay in the Guinea Pig. (II) — Studies of Enhancement Effect of Cyclophosphamide —

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Abstract

We studied the enhancement effect of cyclophosphamide on delayed contact hypersensitivity reaction of chemical compounds in the guinea pig. A series of assay procedures combined cyclophosphamide intraperitoneally administration to AP2 test (Adjuvant and 24 hr occlusive Patch 2 times test) which previously reported was performed by using Hartley albino guinea pig, and benzyl alcohol. Because the delayed contact hypersensitivity reaction in guinea pig was considered to be regulated by a balance degree of effector cells and suppressor cells, we temporarily inhibited the activity of suppressor T cell and B cell by cyclophosphamide intraperitoneally administration in order to enhance its reaction effectively. As a result, cyclophosphamide 200 mg/kg intraperitoneally administration 3 days before the first sensitization of AP2 test (Cyclophosphamide, Adjuvant and 24 hr occlusive Patch 2 times test: CAP2 test) could adequately detect allergenicity of benzyl alcohol. As compared this method with AP2 test, Cumulative Contact Enhancement Test and Guinea Pig Maximization Test, CAP2 test could equally and/or strongly detect allergenicities of strong allergens such as bromostyrol, citronellal, p-phenylenediamine and formaldehyde and weak allergens such as benzyl salicylate and p-aminobenzoic acid ethyl ester. It was histopathologically observed that acanthosis and spongiosis in epidermis and mononuclear cell infiltration into dermis at the skin reaction site. Cyclophosphamide could effectively enhance the delayed contact hypersensitivity reaction of chemical compounds.

Key words: Cyclophosphamide, Delayed contact hypersensitivity, Enhancement, Adjuvant, 24 hr occlusive patch test.