

中文題目：藉由注射胰島素和類固醇的混合劑成功治療對胰島素的延遲性過敏  
英文題目：Successful Management of Delayed Type Hypersensitivity to Insulin with  
Injecting Mixtures of Biphasic Insulin Aspart and Dexamethasone

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### **INTRODUCTION:**

With the invention of insulin analogue, hypersensitivity reactions to insulin was supposed to be less-frequent, with the incidence as low as under 0.1%. Nevertheless, case reports with different types of allergic reactions to insulin analogue were still reported. The most common form is type I hypersensitivity reaction with IgE-mediated. Besides, type III (IgG and IgM-mediated) and type IV (T-cell mediated delayed type) hypersensitivity reactions were also reported. Managements included desensitization, use of continuous subcutaneous insulin infusion(CSII), local or systemic medication with antihistamine or steroids, or even pancreas transplantation. The choice of a successful treatment may depend on the different types of hypersensitivity reactions.

### **CASE REPORT:**

We reported a insulin-dependent type 2 diabetic patient with hypersensitivity reactions to insulin actrapid, insulin aspart, insulin glargine, insulin detemir. and biphasic insulin aspart 30. The local skin allergic reactions appeared about ten to twelve hours after the injection, with indurated erythematous papules and itching sensations. Insulin desensitization was performed as initial management but failed. Skin biopsy with immunohistochemical stain showed perivascular lymphocytic infiltration with mainly T-lymphocyte, indicating type IV hypersensitivity reaction. We continued with the next treatment approach using subcutaneous injection with the mixture of biphasic insulin aspart 30 and dexamethasone to alleviate allergy. After eight months, she became well-tolerated to steroid-free, undiluted biphasic insulin aspart 30 injection. Besides, the treatment effect had lasted after ten years even with switched type of insulin analogue from biphasic insulin aspart 30 to insulin glargine and insulin aspart. There were no more local skin allergy.

### **CONCLUSION:**

We had demonstrated that the ideal management for delayed type hypersensitivity reaction to insulin analogue would be the subcutaneous injection with the mixture of dexamethasone and biphasic insulin aspart 30. The case report offered a good example of how clinicians deal with the rare but important questions of hypersensitivity reactions to insulin analogue.