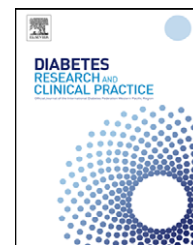




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Diabetes Research and Clinical Practice

journal homepage: www.elsevier.com/locate/diabres

Letter to the Editor

Subcutaneous antihistamine injection is effective to control a local allergic reaction to human insulin

ABSTRACT

Keywords:

Insulin allergy
Continuous subcutaneous insulin infusion
Subcutaneous antihistamine injection

A 31-year-old woman, having a type-1 diabetes and an insulin allergy, was successfully treated with a subcutaneous antihistamine injection to the next continuous subcutaneous insulin infusion site.

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Insulin allergy is now reported in <1% of diabetic patients treated with insulin [1]. Various methods have been used in the treatment of insulin allergy, such as the use of oral antihistamine, the addition of glucocorticoids to insulin, changing to lispro insulin, which has proven to be less allergenic in several cases [2], as well as desensitization [3]. We report a patient with insulin allergy who was successfully treated with a subcutaneous antihistamine injection to the next continuous subcutaneous insulin infusion (CSII) site.

A 31-year-old woman consulted our hospital because of uncontrolled cutaneous allergy to insulin. Type-1 diabetes had been diagnosed 3 years previously. She had begun treatment with several daily injections of human insulin analogs lispro and glargine 2 years previously, without any injection site problems. The treatment method was switched to CSII using lispro with an external insulin pump 1 year previously in order to improve blood glucose control. However, shortly after initiating CSII, she developed a local allergic reaction (pruritus, erythema and swelling) at the injection site. She had to rotate her injection site around various parts of her abdomen everyday because of severe pruritus (Fig. 1). Changing the type of insulin to aspart or human regular insulin did not resolve the injection site problem. Total IgE level was 271 IU/ml ($n < 100$) and specific human insulin IgE antibody level was 6.39 UA/ml ($n < 0.34$). Intradermal tests performed with lispro, aspart, human regular insulin, detemir and glargine all gave positive results.

Because neither oral antihistamine nor topical glucocorticoid was effective for the injection site problem, we tried a subcutaneous antihistamine injection (5 mg chlorpheniramine) to the next CSII injection site, just before a start of infusion. This dramatically reduced the allergic reaction, allowing the fre-



Fig. 1 – Local allergic reactions at the injection sites on her abdomen.

quency of CSII injection site rotation to be reduced to once per three days. During 3 months of follow-up, the patient has been very satisfied, with less pruritus and better blood glucose control. Subcutaneous antihistamine injection can be considered as a safe alternative treatment for insulin allergy.

Conflict of interest

The authors state that they have no conflict of interest.

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21 April 2009

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[10.1016/j.diabres.2009.05.013](https://doi.org/10.1016/j.diabres.2009.05.013)