



Management of Systemic Hypersensitivity Reactions to Gonadotropin-Releasing Hormone Analogues during Treatment of Central Precocious Puberty

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Background

Besides local reactions, systemic hypersensitivity reactions such as urticaria, anaphylaxis, serum sickness and Henoch Schonlein Purpura (HSP) have been reported during gonadotropin releasing hormone analogue (GnRHa) treatment.

Aim:

We report nine girls with systemic hypersensitivity reactions to GnRHa managed in our clinic. An algorithm is proposed for management of such reactions.

Patients and Method:

Nine of 232 (3.8%) patients with precocious puberty receiving GnRHa treatment had hypersensitivity reactions in 3 years period. Six patients had type 1 hypersensitivity reaction (generalised hives, pruritus, and/or edema) to triptorelin acetate (TA), two patients to leuprolide acetate (LA), and one patient to both medications who also developed anaphylaxis to LA during intradermal test (IDT). Another patient on TA had skin lesions suggestive of HSP. GnRHa treatment was discontinued only in two patients due to patient preference. Treatment was shifted to another GnRHa preparation in 6 patients and was maintained with the same medication with antihistamines and corticosteroid premedication in one patient. None of the patients developed new reactions after these precautions.

Conclusion: Systemic hypersensitivity reactions should be evaluated carefully during GnRHa treatment and cross-reaction to the other GnRHa should be kept in mind. To our experience, a practical algorithm is proposed as follows:

- ✓ a) either switch to available alternative GnRHa with or without performing skin prick test (SPT) and IDT under medical supervision and maintain the treatment if there is no reaction to IDT,
- ✓ b) perform desensitization with or without premedication under medical supervision if there is reactivity at SPT and IDT or injections itself ,
- ✓ c) in the condition that alternative GnRH is unavailable, graded challenge under medical supervision of allergy specialist following premedication with antihistamines and/or corticosteroids should be warranted,
- ✓ d) consider termination of depot GnRH in terms of expected benefit versus risk of severe allergies

