

Graves' disease, Methimazole and SLE-like reaction: A case report

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Introduction

Graves' disease therapy in young children may be challenging due to lack of therapy options. The safety of Radio Iodine Ablation (RIA) has not been proven in children under age of 10 years. Propylthiouracil (PTU) therapy has been linked to hepatic failure and became contraindicated in pediatrics

The case

A 6-year-old female was diagnosed with Graves' disease and treated with Methimazole (MTZ) and Propranolol. A few days after starting therapy, she developed an urticarial skin rash, dermatography and erythematous mask-like rash around her eyes. Her parents stopped the therapy and sought a second opinion for evaluation of MTZ induced rash, proptosis and hyperthyroidism. Her total T4 level was 24.6 ug/dl, TSH level was suppressed, and TSII and Anti thyroglobin were strongly positive

Results

We discussed therapeutic options with the family regarding the development of drug-induced lupus like rash. Since PTU was contraindicated and RIA was not safe, we were left with 2 options: Either re-start therapy with MTZ and antihistamine or thyroidectomy. Parents elected surgical option which was performed successfully and rendered the patient hypothyroid, she was started on Levothyroxine and preventive Calcium therapy.

Conclusion

Treating pediatric Graves' disease remains one of the great controversies in pediatric endocrinology. Most patients get started with antithyroid drug therapy but there is a high failure rate with this treatment and many potential side effects. PTU associated liver toxicity made (MTZ) the only oral antithyroid medication approved for pediatric use. When patients experience side effects from MTZ therapy, a clear analysis of the risks versus benefits of therapy should be evaluated. If the side effect is only a minor allergic reaction, continuation of therapy while adding an anti-allergic medication could be considered. But if the allergic reaction is severe, it may affect the compliance and can even progress further. Severe reactions such as bone marrow suppression and arthritis can also occur. At this point, alternative therapies should be sought. If the patient is less than ten years of age, radioiodine ablation therapy (RIA) may not be safe. Thyroidectomy yields cure rates higher than 97% with low complication rates (1–2%).

