CHILDREN WITH GRAVES’ DISEASE

Predictors of Early Remission

© Elaine Moore
This article describes the disease course in children with Graves' disease and explains how certain factors influence early remission in children using antithyroid drug therapy.

Incidence and Causes

The number of children diagnosed with autoimmune disorders is steadily climbing. While the reasons are unclear, the increased number of vaccines and overuse of antibiotics and chemical preservatives are suspected of contributing to this rise. This article describes autoimmune hyperthyroidism, Graves' disease, in children and explains how certain predictors can be used to determine if early remission is likely.

Disease Course and Symptoms

In general, children with Graves' disease typically have a milder disease course and rarely develop eye symptoms. However, because symptoms of hyperthyroidism in children are often similar to the normal changes seen in adolescence or those seen in attention deficit disorders, some children may not be diagnosed until symptoms become severe.

Because symptoms may be more severe than those in adults at the time of diagnosis, children with Graves' disease often require prolonged courses (3-6 years, average 4 years) of low-dose anti-thyroid drugs to achieve remission. Several recent studies show that this protocol offers a high rate, up to 87 percent, of permanent remission.

Achieving Remission

Children who follow diets free of junk and processed foods, which are high in refined iodine and low in nutrients, are more likely to achieve permanent remission. And children who become involved in sports or other activities that help reduce stress can also achieve earlier remissions provided the sports competition isn't stressful in itself.

Researchers at the University of California, Davis School of Medicine have also found several other factors that predict remission. These include a higher body mass index, lower heart rate, smaller goiters, lower platelet counts, lower thyroid hormone levels at the time of diagnosis, and lower levels of thyroid stimulating immunoglobulins (TSI).

In general, children diagnosed with Graves' disease with a mild disease course and mild symptoms were more likely to achieve remission faster than children with cardiac symptoms, goiter and significant weight loss.
In this study, children using a block and replace protocol to prevent hypothyroidism when levels fell too low (from anti-thyroid drugs) also fared better than children on anti-thyroid drug treatment alone. Children were deemed to be in remission when their FT4 level remained within the normal range for six months after medications were stopped. Patients who achieved early remission were also typically older, had an absence of eye symptoms, and had lower heart rates at the time of their diagnosis. Children achieving early remission were also more likely to have normal platelet counts and lower T3/FT3 levels.

Patients who achieved early remission were able to stop anti-thyroid medications within 2 years. Only 25 percent of the children studied achieved remission within 2 years compared to 50-75 percent of adults on anti-thyroid medications. Compliance with taking medications may play a role in this discrepancy. The children whose remission took longer remained on medications for 4 years. The children who achieved early remission were able to use a lower starting dose of PTU than the children whose remission took longer. With methimazole use, the starting dose was the same in both groups. Children with a goiter at the time of diagnosis who showed signs of goiter reduction were also more likely to achieve early remission than children who showed no improvement in goiter.

Males in the study were also more likely to achieve early remission than females. This may be related to fluctuating estrogen levels occurring in females nearing puberty. In both early and late responders, a minority of children used other prescription medications, for instance, beta blockers.

What’s Needed?

Newer studies are needed to show the effects of alternative medicine, nutritional supplements and alternative medicine on the disease course in children. Other studies have shown that children with Graves' disease who achieve remission using anti-thyroid medications are unlikely to have relapses later in life. As with Graves' disease that develops in adults, the disease course is generally self-limiting although periods in which symptoms wax and wane are common.

Resource:

Nicole Glaser and Dennis Styne, Predictors of Early Remission of Hyperthyroidism in Children, Journal of Clinical Endocrinology and Metabolism 1997,

The copyright of the article Children with Graves' Disease in Thyroid Disorders is owned by Elaine Moore. Permission to republish Children with Graves' Disease in print or online must be granted by the author in writing.