

Supportive Care

IMF Hotline Coordinators Answer Your Questions

The IMF Hotline 800-452-CURE (2873) is staffed by Paul Hewitt, Missy Klepetar, Nancy Baxter, and Debbie Birns. The phone lines are open Monday through Thursday, 9am to 4pm, and Friday, 9am to 2pm (Pacific Time). To submit your question online, please email TheIMF@myeloma.org.

I have heard that many myeloma patients have been diagnosed with hypothyroidism. What is it? Why does it occur in myeloma patients? Is it treatable?

Hypothyroidism occurs when the thyroid gland produces insufficient levels of thyroid hormone. It commonly presents as a general slowing in physical and mental activity, but often the signs of this disease are subtle and hard to pinpoint. Classic signs and symptoms are lethargy, cold intolerance, puffiness, decreased sweating, constipation, slow heart rate, hoarseness, and coarse skin.

There have been several case studies, including one by Badros et al in the American Journal of Medicine (2002;112:412-413) that document the incidence of hypothyroidism in multiple myeloma patients being treated with thalidomide. Badros et al found that 14% of patients on thalidomide treatment were subclinically hypothyroid (in other words, they had no outward symptoms, but their laboratory tests showed low thyroid hormone) at three months of therapy. They further suggested that thyroid dysfunction might contribute to some of the known side effects of the drug, such as fatigue, constipation, and bradycardia (slow heart rate).

More recently, there have been reports that Revlimid® (lenalidomide), which is chemically analogous to thalidomide, also causes hypothyroidism. The percentage of patients who developed the problem while receiving Revlimid in clinical trials was 6.8%.

Researchers haven't pinpointed the exact mechanism by which thalidomide and Revlimid affect the thyroid gland. It may be due to the direct toxic effects of the drugs on the gland, or to autoimmune damage to the gland due to deregulations of cellular chemicals called cytokines.

If the patient is responding well to antimyeloma therapy with either thalidomide or Revlimid and then develops hypothyroidism, he or she may continue the thalidomide or Revlimid and concurrently receive thyroid hormone replacement therapy; symptoms of low thyroid hormone will abate as thyroid levels normalize.

Obstacles to proper management of the thyroid during thalidomide or Revlimid therapy are:

- 1) the assumption (by both patients and physicians) that the symptoms are merely side effects of the drug, and
- 2) failure to detect the occurrence of asymptomatic hypothyroidism.

Some patients diagnosed with myeloma may even have underlying hypothyroidism as a result of pre-existing viral or autoimmune thyroid disease. Patients who receive thalidomide or Revlimid should, therefore, have their thyroid function checked both before receiving either of these drugs and periodically during treatment. If the patient is found to be hypothyroid, then further medical review is required to be certain of the cause. **MT**