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Amiodarone and the Thyroid

TO THE EDITOR: Mazonson and associates (1) report that myxedema is not an uncommon occurrence during amiodarone therapy. However, the exact metabolic effect of amiodarone on the thyroid function remains unclear. Singh and Nademanee (2) originally monitored reverse triiodothyronine as a guide to therapeutic effectiveness of amiodarone, but this is probably an early indication of amiodarone's overall effect on thyroid function. Martino and colleagues (3) have shown that hyperthyroidism is commoner in patients with low iodine intake, and hypothyroidism is commoner in patients with a normal iodine intake.

Of our 145 patients, follow-up thyroid studies have been done for 104; thyrotrophin levels were elevated in 72 of 104 patients (69%). The incidence of hypothyroidism was approximately 32% and that of hyperthyroidism, approximately 23%. The mean dose of amiodarone was 311 mg/d, and the mean length of follow-up was 28 months.

Comparisons were made of 11 patients receiving levothyroxine (mean follow-up, 22 months), 1 patient receiving methimazole (follow-up, 28 months), and of 8 patients (mean follow-up, 18 months) who remained euthyroid. The hypothalamic pituitary axis was elevated. The triiodothyronine resin uptake, thyrotrophin, free thyroxine index, triiodothyronine shown by radioimmunoassay, and thyrotrophin-releasing factor shown by radioimmunoassay were within normal ranges in all three groups. However, the reverse triiodothyronine (normal, 20 to 53 mg/dL) was elevated in the euthyroid patients (mean, 64 mg/dL) and in the patient receiving methimazole (56 mg/dL). The thyrotrophin level (normal, 0 to 4 μ U/mL) was elevated in all three groups (13.6 μ U/mL in euthyroid patients, 26.4 μ U/mL in patients on levothyroxine, and 4.3 μ U/mL in the patient on methimazole). In all groups the thyrotrophin level rose greater than two times the baseline 30 minutes after receiving thyroid-releasing factor (4).

We have recently tested for radioactive iodine-131 uptake in four additional patients who have developed hyperthyroidism while receiving amiodarone therapy. However, the radioactive iodine uptake was less than 5% in these patients. Thyrobinding globulins were normal, and there was no clinical evidence of active thyroiditis. On the basis of these data and those previously published, it is clear that amiodarone's effects on thyroid metabolism remain unexplained. The data suggest an intracellular effect on thyroid hormone metabolism independent of the thyroid-pituitary axis or an effect on peripheral degradation of thyroid hormone.

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Hemophilia and the Acquired Immunodeficiency Syndrome

TO THE EDITOR: Approximately 2 years have elapsed since the first description of the acquired immunodeficiency syndrome in patients with classic hemophilia (factor VIII deficiency) (1). An update of the frequency of problems related to this syndrome in Northeast Ohio may provide some insight into the magnitude of the problem in this population. As of 1 January 1982, 91 patients with classic hemophilia were enrolled in home therapy programs using lyophilized preparations of antihemophilic factor (factor VIII). Since that date, 7 patients have died, 3 of processes apparently unrelated to the syndrome, including 2 who died of chronic active hepatitis (1 associated with alcoholism), and 1 of upper gastrointestinal bleeding that seemed to arise from chronically inflamed mucosa (KASPER CK. Personal communication). Four patients have died of the acquired immunodeficiency syndrome or associated illnesses, namely, 2 of opportunistic infection (2), 1 of Burkitt's lymphoma (3) and 1 of diffuse histiocytic lymphoma. Of the 84 survivors, 1 is receiving treatment for a toxoplasma brain abscess; 15 (including this last patient) have had unexplained enlargement of lymph nodes in at least two extra-inguinal sites, splenomegaly, or both; and 5 have had a syndrome resembling idiopathic thrombocytopenic purpura (4). In all, 24 of 91 persons have developed the acquired immunodeficiency syndrome or unusual symptoms that have been seen in others at risk.

Curiously, this formidable morbidity and mortality has done little to shift behavior. Among the 84 survivors, only 5 have turned to the use of cryoprecipitated antihemophilic factor, although no cases of the syndrome have been reported in patients treated with this agent.

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