Dear Editor;

A 46-year-old man was referred to our department because of thyrotoxicosis. He had a 5-year history of ischemic dilated cardiomyopathy and ventricular tachycardia treated by implantable cardioverter-defibrillator and oral amiodarone 400 mg/day. Cumulative dose of amiodarone was estimated to be 700 g over 5 years. He had no history of previous thyroid diseases. There was no thyroid dysfunction before the initiation of amiodarone therapy. Several months after the initiation of amiodarone treatment, progressive facial hyperpigmentation had developed. In the last 8 weeks, he complained of palpitations, weight loss (4 kg) and fatigue. His physical examination revealed tachycardia (110 beats/min), increased pulse pressure (BP: 140/60 mmHg), and blue-gray pigmentation of the face (figure 1). The thyroid gland was increased in volume, no nodules were palpable. There were no symptoms or signs of Graves’ ophthalmopathy.

Thyroid function tests were as follows: free thyroxine: >100 pmol/L (normal values: 12-22 pmol/L); free triiodothyronine: 27.73 pmol/L (normal values: 3.1-6.8 pmol/L); and thyroid-stimulating hormone (TSH): less than 0.005 uIU/mL (normal values: 0.27-4.2 uIU/mL). Antithyroidperoxidase, antithyroglobulin and anti-TSH receptor antibodies were undetectable. Erythrocyte sedimentation rate and complete blood count were normal. No iodine-containing contrast agent has been recently administered to this patient. Thyroid ultrasonography revealed an enlarged thyroid gland with no nodules. Thyroid radioactive iodine uptake (RAIU) was 0.1% after 4 hours and 0.1% at 24 hours. The patient was diagnosed with amiodarone-induced blue gray pigmentation and thyrotoxicosis. Amiodarone was replaced by metoprolol succinate. He was treated with propylthiouracil and oral prednisone (40 mg/day) for thyrotoxicosis. The skin discoloration was still evident, but diminished, at three-month follow-up.

Amiodarone is a class III antiarrhythmic drug widely used for the treatment of supraventricular and ventricular tachyarrhythmias and in the management of severe congestive heart failure. It has numerous side effects other than thyrotoxicosis, such as toxicity of the lungs, liver, eyes and nerves. Photosensitivity and less frequently phototoxicity are important dermatological side effects. Blue-gray discoloration of the skin is an uncommon side effect caused by the ultraviolet accumulation of lipofuscin in dermal macrophages. Amiodarone-related hyperpigmentation should be considered a skin storage disease that is secondary to drug deposition (1). Its incidence ranges from 2 to 57%, preferentially affecting men (2, 3). It occurs after an average of 20 months of continuous treatment and a minimum cumulative dose of 160 g (4). The only treatment is reduction or cessation of amiodarone therapy, upon which skin changes may slowly abate. However, skin discoloration is likely to persist for years.

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References