

Case Report

Low Back Pain Following Intravenous Administration of Amiodarone

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Amiodarone is a widely used antiarrhythmic drug whose use is significantly limited by numerous undesirable effects following long-term administration. In the literature so far, it has been reported that the most common acute adverse effect of the intravenous administration of amiodarone requiring intervention is hypotension. We present the case of a female patient who experienced low back pain after an intravenous loading dose of amiodarone.

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The use of medications has been associated with a risk of development of adverse effects, either well-known or completely unexpected. It is estimated that drug-induced adverse effects account for 5-7%, and in the elderly as many as 10%, of all hospitalisations, and are responsible for 0.15-0.30% of inpatient deaths.^{1,2} Amiodarone is recommended for cardioversion and prevention of recurrences of atrial fibrillation in patients with structural heart disease, including those with coronary artery disease and left ventricular dysfunction.³ We present the case of a middle-aged woman who suffered low back pain after the intravenous administration of amiodarone.

Case presentation

A 71-year-old woman with a medical history of hypertension and a permanent dual-chamber pacemaker implanted because of sick sinus syndrome (bradycardia-tachycardia syndrome) presented to the emergency department complaining of dizziness and palpitations that started approximately 3 hours previously. She had experienced similar events during

the last month. Her previous medication included ramipril, sotalol and warfarin. A 12-lead ECG revealed atrial fibrillation with a rapid ventricular response of about 150 beats/min. Physical examination revealed no pathological signs except tachyarrhythmia. The patient had normal complete blood count, blood gases, serum blood electrolytes and serial cardiac markers. Transthoracic echocardiography revealed mild left ventricular hypertrophy with a normal ejection fraction. In view of her clinical history, intravenous administration of amiodarone in a loading dose of 5 mg/kg over 30 minutes was initiated. About 4 minutes after drug administration the patient complained of acute low back pain. The patient denied any history of lumbar pain and the infusion was stopped. The patient's symptom was completely resolved within 15 minutes. Abdominal ultrasound was normal, while lumbar magnetic resonance imaging did not reveal any significant lesions that could be related to the event. The patient was discharged with specified instructions about her arrhythmia, including an increased dose of sotalol administration.

Discussion

Amiodarone is an effective antiarrhythmic agent for the prevention and treatment of both supraventricular and ventricular arrhythmias.^{3,4} However, its use is significantly limited by numerous undesirable effects following long-term administration. These include pneumonitis, pulmonary fibrosis, liver and thyroid gland abnormalities, central nervous system and gastrointestinal disturbances, peripheral neuropathy, dermal photosensitivity and discolouration, corneal deposits, testicular dysfunction, bradycardia, heart block and others.^{5,6} Amiodarone toxicity is associated with its very long (58 days) half life, resulting from its lipophilicity and accumulation in the adipose tissue, muscles and many other organs.⁷ The most common acute adverse effect of amiodarone requiring intervention is hypotension, which is observed in approximately 20% of patients following intravenous administration.⁸⁻¹⁰

In the present case, an elderly woman experienced acute low back pain after the intravenous administration of amiodarone. To the best of our knowledge, there are only two cases in the current literature describing the same adverse effect.¹¹ As in our case, the lumbar pain commenced a few minutes after the loading dose of amiodarone and the symptoms disappeared after the cessation of the drug. In both cases, the patients did not display any history of back pain and were being given amiodarone for the first time. Acute low back pain, though not described as an adverse effect of the intravenous administration of amiodarone, appears to be a benign reaction that is resolved after cessation of the infusion. Clinicians should be aware of this rare adverse effect of intravenous administration of amiodarone.

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