

Recurrent Panic Attack and Ubiquinone Treatment: A Case Report

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Panic attacks are sometimes difficult to diagnose as their presentation frequently mimics that of other diseases such as acute coronary syndrome. More than 50% of patients, who present to emergency departments with chest pain, have serious cardiovascular diseases such as myocardial infarction, angina, pulmonary embolism and heart failure. The remaining 50% have symptoms associated with panic disorder, pulmonary disease, musculoskeletal conditions, or gastrointestinal disease.¹ Panic disorder affects 1 to 2% of the adult population and is most frequently managed in psychiatric consultation. Symptoms associated with panic disorder are very similar to those seen in paroxysmal supraventricular tachycardia, and coronary artery disease. Reports on the relationship between panic disorder and increased risk of coronary heart disease are equivocal.^{2,3}

The authors obtained the informed consent of the patient to report this case. He is a 61 year old Caucasian research professor who presented in March, 2013 with chest tightness and discomfort, palpitations and episodes of dyspnoea. He does not use substances and has a history of hypertension. On examination he had normal blood pressure and pulse rate. The resting electrocardiogram was normal on two occasions within a fortnight. The blood count, thyroid function, thyroid antibodies, lactate dehydrogenase, creatine kinase, troponin T levels and D-Dimer assay were normal. His social history was unremarkable, except for his mother's death nine months prior to presentation. Physical examination indicated a body mass index 30 kg/m², and he had a score of one on the Rouan decision rule for myocardial infarction (used to predict which patients are at high risk of having a myocardial infarct).⁴ A brief diagnostic screening tool was used for the diagnosis of panic disorder, the findings of which were consistent with a possible panic attack.⁵ His symptoms continued for more than one month, with persistent concern about having additional attacks.

The patient was initially treated with alprazolam 0.5 mg daily and escitalopram 10 mg per day. After repeated panic attacks were observed, the treatment was changed to a combination of sertraline 25 mg per day, ethyl loflazepate 2 mg per day and alprazolam at the same dosage three times a day. Anxiety continued and all treatment was suspended since symptoms had continued despite pharmacological intervention. Consequently, the prescription was changed to ubiquinone 400 mg per day (CoQ10 or Coenzyme Q10 GNC). Two to three weeks after commencement of ubiquinone, the patient was symptom free.

An increasing number of cases, where the use of new antipsychotics have been associated with serious

arrhythmias, prolonged QT interval⁶, and orthostatic hypertension in patients without a history of cardiovascular disease, have been reported, prompting a search for alternative treatment options. Given that animal models and some neurodegenerative disorders^{7,8}, have revealed alterations in mitochondrial function and oxidative stress in anxiety disorders, ubiquinone is a potential treatment modality for the condition since it can decrease oxidative stress.⁹ Anxiety disorders are related to the neurotransmitters gamma-amino-butyric-acid, serotonin, noradrenalin, cholecystokinin, glutamine and nitric oxide (NO).¹⁰ Anxiogenic effects occur when NO synthesis is inhibited and come about via a decrease in oxidative stress.¹¹ Kaya et al. proposed that antioxidants could be a strategy for the treatment of panic disorder.¹⁰

Although this patient settled on ubiquinone, the placebo effect cannot be ruled out. Thus, it is suggested that a case-control study should be undertaken to evaluate this drug in the management of panic disorder.

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