

A 21-year-old male patient presented at the emergency department with compressive chest pain ongoing for 1 hour. The physical examination revealed that the patient was feeling anxious, heart rate was 110 beats/minute and blood pressure was 100/60 mm Hg. Electrocardiography indicated ST segment elevations in leads II, III, aVF, and V2-V6 derivations. Echocardiography showed hypokinetic septum, anterior, and apical walls. Following treatment with acetylsalicylic acid, clopidogrel, and enoxaparin, 100 mg tissue-plasminogen activator was administered within 90 minutes. The patient had no risk factor for coronary artery disease and no exposure to emotional or physical stress. His body mass index was measured at 30 kg/m². The patient stated that he had taken "La Jiao Shou Shen" cayenne pepper pills that he had bought via the Internet twice a day for 2 days and that he had taken the last dose 1 hour before the onset of his chest pain. The patient was transferred to our center. Coronary angiography revealed normal coronary vessels. Laboratory analysis yielded cardiac troponin I >50 ng/mL (normal range: 0–0.01 ng/mL), creatinine kinase MB >300 U/L (normal range: 0–25 U/L). The patient's chest pain subsided and did not recur, and cardiac markers decreased. Provocative tests couldn't be carried out during angiography, but it was thought that the myocardial infarction and electrocardiographic changes were probably secondary to coronary vasospasm associated with cayenne pepper pills. Oral 120 mg daily verapamil was added to his therapy. No signs of ischemia were found in the effort myocardial perfusion scintigraphy performed 1 month later. The patient has had no problems in follow-up of 1 year.

In addition to its analgesic, anticancer, anti-inflammatory, and antioxidant effects, nowadays capsaicin is increasingly used improperly for weight loss as it increases sympathetic activation and accelerates metabolism (1, 3). Capsaicinoids lead to increased heart rate, blood pressure, and dysrhythmic discharges with increased adrenaline (3). Activation of the capsaicin receptor, also known as transient receptor potential vanilloid subfamily member 1 (TRPV1), has direct cardiovascular effects (1–3). Szolcsányi et al. (4) demonstrated that endothelin-mediated capsaicin induced dose-dependent coronary vasospasm in isolated working rat hearts. Akçay et al. (5) reported coronary vasospasm cases induced by analgesic-purpose, topical capsaicin. In patients with coronary vasospasm-mediated myocardial infarction, coronary arteries are observed as normal and these patients are usually young patients without atherosclerotic risk factors. Usually, improperly used, external agents or psychological stress is the trigger. Management and treatment are similar to those of coronary atherosclerosis (2, 5). Although arterial vasospasm can be revealed with provocative tests, these tests have high risk during the course of myocardial infarction and cannot always be performed, as in our case.

The use of improper alternatives, especially herbal therapies, for weight loss is increasing. Society should be warned about this issue.

An unusual side effect of weight loss pills in a young man; acute myocardial infarction due to cayenne pepper pills

To the Editor,

As obesity becomes widespread, alternative treatments are sought, and the improper use of cayenne pepper pills increases with easy availability of these pills. The main components of cayenne pepper pills are capsaicin and its derivatives, which cause sympathetic discharge and increase energy consumption and fat burning. Since these agents can cause vasospasm, the number of the cases with cardiotoxic effects reported in the literature has increased.

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