Obesity, Pepper Pills and Acute Coronary Syndrome

Dear Editor,

Obesity is a growing public health problem and 'Obesity Prevention and Control Program' is one of the current policies of Ministry of Health. Promoting physical activity and good nutritional habits has paramount importance in obesity prevention. In some instances, use of some medications under control of health care professionals may be necessary. However, despite the warnings of the authorities, non-prescribed herbal weight control products and food supplements are being extensively consumed by over-weight population. Contrary to common belief of the users, herbal medicines and food supplements are complicated by some problems such as lack of scientific evidence of safety and efficacy, lack of regularity oversight, lack of quality control, lack of knowledge about interactions with other drugs and also public misinformation.[1] Randomized controlled trials are the best way to define efficacy and safety of a medication. Most herbal products do not possess controlled trials which are not requested by consumers or health care practitioners, and not required by regulatory agencies. Compared to prescribed drugs, oversight and restrictions on production of herbal drugs and food supplements are limited. Additionally, contamination with heavy metals, adulteration with pharmaceuticals, and prohibited animal and plant ingredients are repeatedly found in herbal products. In this context, here, I presented an acute coronary syndrome case with angiographically normal coronary arteries possibly related to use of pepper pills which were taken for weight losing purpose.

A 34-year-old overweight male patient (body mass index: 29.8 kg/m^2) was admitted to our emergency department with squeezing chest pain which emerged two days ago. He claimed that chest pain became more severe in the last six hours and lasted more than 25 minutes. He had no dyspnea or dyspepsia. He was an ex-smoker and quitted smoking seven months ago. No additional conventional risk factors of coronary artery disease were present. He claimed that currently he did not use any prescribed or illicit drugs other than pepper pills for weight losing. He was taking those pills once-a-day for three days and chest pain began after ingestion of the pills. On physical examination, no murmur was heard and lungs were clear. Electrocardiography revealed nonspecific ST-T changes. On transthoracic echocardiography, there was no significant wall motion abnormality, sign of pericarditis or aortic dissection. However, blood tests revealed high troponin values. Since chest pain and positive troponin result were compatible with acute coronary syndrome, anti-ischemic, anti-thrombotic treatment was initiated. In the 18th hour of hospitalization, coronary angiography was performed which revealed normal coronary arteries. Troponin levels showed relevant rise and fall in the follow-up. Troponin level was still slightly high when he was discharged in the third day of hospitalization. Electrocardiogram did not change significantly during the follow up. Possible prolonged coronary vasospasm was considered as mechanism of cardiac injury. Apparently pepper pills were the possible cause of coronary event. Patient was advised to cease using pepper pills. After the cessation of aforementioned pills, chest pain did not recur during hospitalization and after discharge. He was symptom free in the first month follow-up visit.

Pepper pills and its well-known active ingredient capsaicin are used in the obesity treatment for its thermogenic effect by stimulating catecholamin secretion. Besides, topical capsaicin preparations are widely used in the pain management and capsaicin was also studied for its potential use in cancer therapy.[2] Capsaicin is highly irritant molecule and ingestion of large amounts may cause gastrointestinal disturbances. Also capsaicin intake may cause cardiac complications. In a study, pretreatment with capsaicin was found to be related to more extensive myocardial infarct size in animals with experimentally occluded coronary arteries.[3] Recently, two acute coronary syndrome cases related to capsaicin containing pepper pills have been reported by Turkish authors.[4,5] In both cases, patients were relatively young for coronary accident and had no conventional cardiovascular risk factor. In our case, use of pepper pills was the highly possible trigger

of acute coronary syndrome in a low coronary risk patient. In clinical practice, prescribed drugs are questioned during examinations but non-prescribed herbal drugs are usually ignored. Thus, awareness of community and health care providers about these kinds of drugs is important to avoid undesired consequences.

Serkan DUYULER, M.D.

Department of Cardiology, Hakkari State Hospital, Hakkari

References

1. Tachjian A, Maria V, Jahangir A. Use of herbal products and potential interactions in patients with cardiovascular diseases. J Am Coll Cardiol 2010;55:515-25. [CrossRef]

2. Luo XJ, Peng J, Li YJ. Recent advances in the study on capsaicinoids and capsinoids. Eur J Pharmacol 2011;650:1-7. [CrossRef]

3. Källner G, Franco-Cereceda A. Aggravation of myocardial infarction in the porcine heart by capsaicin-induced depletion of calcitonin gene-related peptide (CGRP). J Cardiovasc Pharmacol 1998;32:500-4. [CrossRef]

4. Sayin MR, Karabag T, Dogan SM, Akpinar I, Aydin M. A case of acute myocardial infarction due to the use of cayenne pepper pills. Wien Klin Wochenschr 2012;124:285-7. [CrossRef]

5. Sogut O, Kaya H, Gokdemir MT, Sezen Y. Acute myocardial infarction and coronary vasospasm associated with the ingestion of cayenne pepper pills in a 25-year-old male. Int J Emerg Med 2012;5:5. [CrossRef]