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CASE REPORT OPEN ACCESS

A Rare Case: Hyperacute Anterior MI Following Plant-Based Drug Use

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Introduction: Acute myocardial infarction (AMI) is one of the foremost reasons of cardiovascular diseases, which may be fatal in lack of early diagnosis and treatment. Risk factors associated with the disease among the elderly population are fairly straight forward, however among the under-40 age group; they are yet to be unveiled in its completeness. AMI patients under 40 years of age should be questioned especially about cocaine addiction and other drug use in addition to the classic risk factors for coronary artery disease.

Case Presentation: In this case report, we discuss a 35-year-old patient who had Acute anterior myocardial infarction as a result of uncontrolled use of ginseng, lepidium, and epimedium containing herbal medicines due to infertility and who had no other apparent risk factor.

Keywords: Acute anterior myocardial infarction, herbal drug, infertility

Introduction

Acute myocardial infarction (AMI) is one of the foremost reasons of cardiovascular diseases, which may be fatal in lack of early diagnosis and treatment. Risk factors associated with the disease among the elderly population are fairly straight forward, however among the under-40 age group; they are yet to be unveiled in its completeness. AMI patients under 40 years of age should be questioned especially about cocaine addiction and other drug use in addition to the classic risk factors for coronary artery disease. It has been reported that ginseng-containing herbal components boost cardiac activity when used in heart failure and that its chronic use might cause ginseng abuse syndrome with hypertension (1). However, it has also been reported to have hypotensive effects (1, 2). Lepidium extracts, known to be commonly used in the treatment of infertility, are also reported to be cardioprotective (3). Another herbal agent, Epimedium, used especially in Chinese and Korean medicine

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against many diseases, particularly infertility and cardiovascular diseases, is reported to be cardioprotective and antihypertensive (4).

In this case report, we discuss a 35-year-old patient who had AMI as a result of uncontrolled use of ginseng, Lepidium, and epimedium containing herbal medicines due to infertility and who had no other apparent risk factor.

Case Presentation

A 35-year-old male patient was admitted to the ER with the complaint of pressure-like pain which began about half an hour ago and spread to the anterior chest, left arm, and lower jaw. According to the anamnesis of the patient, he had no known disease, had no risk factors for CAD, and did not smoke. Upon questioning regarding drug use, it was learned that he had been using 3 different herbal products containing Lepidium, Ginseng, Epimedium + L-arginine for about a month due to infertility (Figure 1). The patient took these drugs on his initiative under no doctor's control. The patient's ECG was compatible with hyperacute anterior MI (Figure 2). Biochemical tests found out Troponin I as 0.631 ng/ml. Other lab test results were within normal reference values.



Figure 1. Herbal products containing Lepidium, Ginseng, Epimedium+L-arginine

After basal blood values were taken, the patient was taken to the coronary angiography laboratory for primary percutaneous coronary intervention. Coronary angiography showed LAD: total occlusion before DI and CX and RCA to be normal. The LAD lesion was passed with a 0.014-inch floppy wire. When the lesion was passed, it was observed to be with intense thrombus. The patient was administered Ticagrelor 180 mg, acetylsalic acid 300 mg, and heparin 7500 units IV. Intra-coronary abciximab was performed after intense thrombus persisted after balloon (3.5x20mm) predilatation and then stent (4.0x24mm) was implanted at 12 atm (Figure-3).

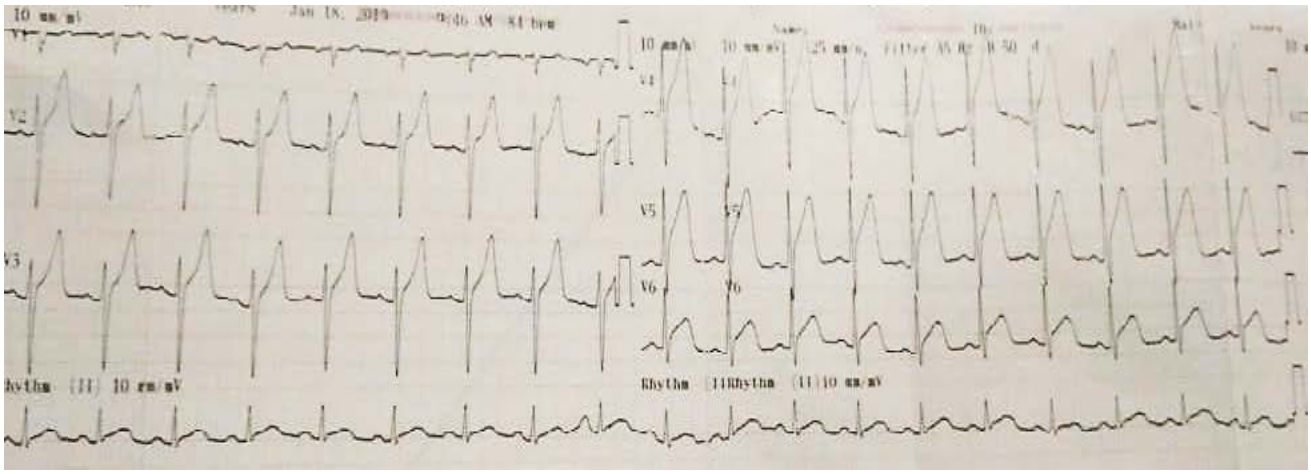


Figure 2. The ECG with Hyperacute AMI

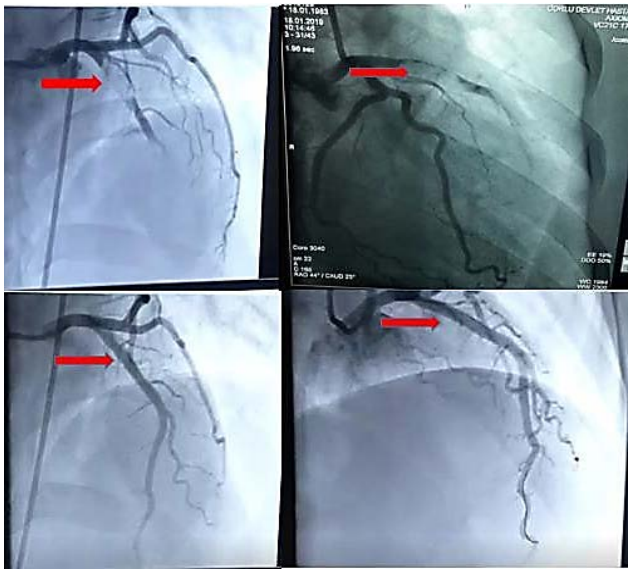


Figure 3. Coronary Angiography

The patient with no complication or complaint in the follow-up was determined to have trans thoracic echocardiography within normal limits and was discharged.

Discussion

AMI is a rare condition in patients under 40 years of age without any risk factors. Drug use should be questioned in this patient group as in our case. It is reported that the herbal agents Lepidium, ginseng, and epimedium, also used in our case, are cardioprotective (1- 4). Besides, it is reported that depending on the dosage, ginseng has such cardiovascular side effects as stent thrombosis and AMI (5, 6). In another study, it was stated that the epidemic reduced reperfusion injury and rehabilitated myocardial functions (7). In light of all this information, we should bear in mind that besides their cardioprotective effect, these herbal agents might have cardiac side effects and we should use them with caution. Especially Panax ginseng is known for its hypotensive effect, however in its chronic use and depending on the dosage, it might trigger what is called "ginseng abuse syndrome" with hypertension, behavior change, and diarrhea. Coronary angiography in our case showed that acute coronary syndrome developed based on dissection in LAD, which led us to consider that labile hypertension might have caused the shear-stress (8-9). Moreover, in our country, the data, whether these drugs are adequately controlled during the certification and production phases, is insufficient and it is not clear whether the indicated doses are correct or not. Studies on the concomitant use of these agents, widely used in infertility, are insufficient. As with this case, we think that the combined use of these herbal agents might be associated with an increased risk of cardiac side effects.

Conclusion

Acute myocardial infarction is rare in patients under 40 years of age without the risk factors. As in our case, drug use should be questioned in patients without any risk factors. In this case, the absence of classical risk factors led us to the conclusion that these herbal agents might have caused the AMI. This case is significant in the sense that it demonstrates the possibly deadly consequences of treatments which are not advised by doctors and are not in line with rational drug use.

Conflict of Interest

The author declares no competing interests.

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