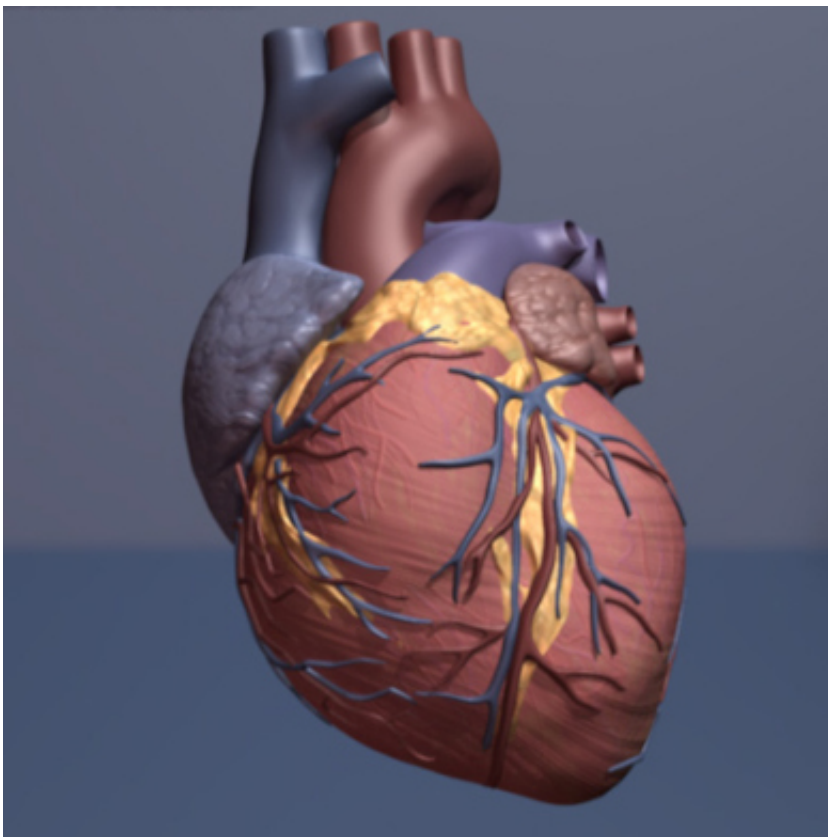


Case study finds calcium channel blockers effective for pregnant patient with vasospastic angina

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Human heart. Credit: copyright American Heart Association

A woman with hopes to conceive was diagnosed with severe vasospastic angina (VSA); however, she was able to carry a healthy baby to full term without angina attacks after starting treatment of a calcium channel

blocker, according to a case published in a special cardio-obstetrics issue of *JACC: Case Reports*.

Vasospastic angina is an abnormality of the coronary artery. It presents as chest pain that is caused by coronary artery spasm. It can result in recurrent episodes of angina, including at rest, and can progress into coronary microvascular dysfunction, acute myocardial infarction, ventricular arrhythmias and even sudden cardiac death. VSA can be triggered during pregnancy when hormonal and nervous system changes occur.

This case presents a patient with no medical history who was in the process of trying to conceive. VSA is often overlooked in patients presenting with chest pain but can result in [acute myocardial infarction \(heart attack\)](#) in [pregnant women](#). Due to its risks to pregnancy, it is important for clinicians to make a definitive diagnosis of VSA, determine its severity and provide proper treatment.

People with VSA are usually treated with calcium channel blockers, however, there is some concern of their safety when prescribed to pregnant people.

"Pregnant patients with vasospastic angina may require special management," said Kota Murai, MD, Ph.D., a cardiologist at the Department of Cardiovascular Medicine, National Cerebral and Cardiovascular Center, Suita, Osaka, Japan and an author of the study.

"Clinicians must be able to accurately assess the advantages and disadvantages of certain VSA treatments and determine which is most beneficial to the health of both the mother and child. This case offers clear evidence of the advantages of the careful management of calcium channel blockers for people who are pregnant or trying to get pregnant."

Calcium channel blockers are under speculation for pregnant patients due to reports of teratogenicity in animal studies. They are unlicensed for use in pregnancy in many countries. However, study authors conclude that [calcium channel blockers](#)—such as diltiazem—should be considered under certain conditions. Conditions include prior consultation with the patient, family, obstetricians and cardiologists, invasive catheterization and testing.

To achieve the patient's diagnosis and determine perinatal cardiovascular risk, doctors performed invasive coronary catheterization and vasospasm provocation testing, which resulted in sub-occlusion in the left main trunk (LMT) with chest pain, ST segment depression in the V4–6 leads and hypotension.

She was then administered an infusion of isosorbide mononitrate and nicorandil, which alleviated her symptoms. After testing, the patient was confirmed to have severe vasospastic [angina](#) and was administered a [calcium channel blocker](#).

The patient was prescribed diltiazem 200 mg daily and successfully conceived shortly after treatment. The effectiveness of diltiazem was confirmed when she experienced [chest pain](#) after treatment was temporarily discontinued due to hyperemesis gravidarum.

Her pregnancy progressed without VSA symptoms after the second trimester and there were no signs of abnormal development of the fetus. After delivery, the patient continued treatment with no recurrence of symptoms and the child obtained no disabilities.

More information: *JACC: Case Reports* (2023)

Provided by American College of Cardiology

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