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Spontaneous Coronary Artery Dissection among Women

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Introduction

It has been noted that women often place their own health care on the bottom of their priority lists. Many times, they ignore simple pain and dismiss symptoms that may be troubling to health care providers. Health care providers especially to young women may dismiss complaints of chest pain as heartburn or anxiety. Changes seen in pregnancy and with menses can mimic some of these same complaints. As both an female professional in health care and as a patient it is very easy to get busy with the day and not recognize simple signs and symptoms that may lead to serious health conditions. It is for this reason the topic of spontaneous coronary artery dissection in women. Reminding the provider to take the time to listen to the patient as well as themselves and to follow through as it may be life saving.

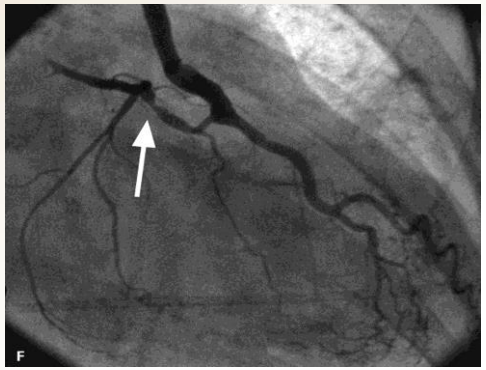
CASE PRESENTATION

A 35 year old G 2P2 female presented with a two hour history of restrosternal chest discomfort radiating to the jaw, associated with nausea and diaphoresis. She was 7 months post-partum and had no underlying cardiovascular risk factors. On physical exam, the heart rate was 84bpm with a blood pressure of 115/70 mmHg. The jugular venous pressure, heart sounds and breath sounds were within normal limits. The initial EKG demonstrated evidence of an acute inferior ST elevation myocardial infarction (STEMI). On coronary angiography, there was evidence of a distal dissection of the left second obtuse marginal (OM2) coronary artery, with no percutaneous options for repair. During the patient's admission to CCU, the cardiac enzyme levels including creatine kinase and high sensitivity troponin T peaked at 1340 U/L and 3702 ng/L, respectively. Transthoracic echocardiography (TTE) demonstrated mild hypokinesis of the basal inferior wall with a left ventricular ejection fraction of 50-55%. As the hematologic and connective tissue disease work-up was negative, the patient was diagnosed with an acute inferior STEMI secondary to spontaneous dissection of the OM2. The patient was appropriately discharged on dual antiplatelet therapy including ASA and Clopidogrel including beta blockade and Metoprolol. (Cenkowski, 2012, pp. 122)

Discussion

Spontaneous coronary artery dissection was once thought to be a very rare finding and usually results in sudden death.

"The true prevalence, causes, prognosis, recurrence rate, and optimal management of SCAD remains uncertain, but recent increases in the use of social media, in patient engagement, and in the formation of disease-specific online communities have facilitated case finding and have accelerated the progress of SCAD research." (Hayes, 2014, p. 295).



Review of the literature it is amazing that many of these young women may not have any signs or symptoms. Many patients may present to the ER with chest pain as the only symptom. Therefore, it is imperative that we consider this severe condition as a real threat to women.

Spontaneous coronary artery dissection (SCAD) occurs when there is a separation of the layers of the coronary artery wall that creates a flap or hematoma that obstructs blood flow.

The current thought is that SCAD especially in young women is not caused from atherosclerosis. Martinez (2012) states:

> The dissections that occur in the peripartum state are primarily dissections involving the media and adventitia of the arterial wall. …. Possibly, eosinophilic granules found in the coronary arteries in autopsy studies of SCAD indicate a systemic manifestation of this process. Eosinophilic granules contain numerous lytic substances, including collagenase, peroxidase, and acid phophatase. These substances may break down the medial-adventitial layers of the arterial wall, leading to a propensity for dissection. In addition, high estrogen and progesterone level associated with normal pregnancy and the peripartum period may contribute to the risk of SCAD. (p. 23)

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