

# Women and Spontaneous Coronary Artery Dissection

This topic is for all the women in the group and to their well wishers

Vast majority of the heart attacks are the result of atherosclerosis, and is the disease of aging. Most men experience their first heart attack in their mid 60s and women in their early 70s. Heart attacks can also occur in young, relatively healthy individuals also. When they do, SPONTANEOUS CORONARY ARTERY DISSECTION, otherwise called SCAD more likely to be the cause.

Instead of causing blockage and blood clots that interfere with the blood flow through the coronary arteries, SCAD causes a tear in the inside wall of an artery and drift into the lumen( which is the hollow center of the artery through which blood flows).

SCAD is the most common cause of heart attacks in women under the age of 65 but it can occur any time in a woman's life

**CAUSES OF SCAD** Even 10 years back, SCAD was considered to be rare event. Increasing awareness of the disease is causing it to be recognized more often. Unfortunately SCAD is under diagnosed even now. It is important to have high index of suspicion when a young person presents with chest pain, more so in young women without traditional cardiovascular risk factors.

SCAD is often seen in women with fibromuscular dysplasia, in patients with systemic inflammatory diseases such as rheumatoid arthritis or connective tissue disorders like Marfan Syndrome( where there is weakness in the wall of the arteries) and also in patients with hypothyroidism( underactive Thyroid).

Often SCAD is associated with pregnancy, occurring during the third trimester or shortly after delivery. It is more common in women with multiple previous pregnancies. SCAD in men is often associated with bench pressing heavy weights, and other forms of extreme exertion.

In both sexes, it is often seen increasingly associated with illicit drug use, emotional turmoil, and activities that cause internal pressure to raise such as Valsalva maneuver retching and straining. According to one study,, coronary artery tortuosity maybe a marker for a potential mechanism for SCAD.

Triggers for SCAD -Emotional stress precedes the event in approximately 50% of the cases -Exercise. Intense exertion precedes the event in an about 30% of the cases, including isometric stress, like lifting or pushing more than 50 pounds. Males are more likely than females to have isometric exertion as a trigger of SCAD -Hormonal.

Endogenous or exogenous sex hormones such as estrogen and progesterone may trigger SCAD

**SIGNS AND SYMPTOM** These patients often present similar to atherosclerotic heart disease, with changes in the electrocardiogram, and also increase in the cardiac biomarkers, such as increase in TROPONIN in the blood and also along with following symptoms -Chest pain and/or pain in the arms, neck or back -Sweating -Nausea and/or vomiting -Difficulty in breathing

**CONFIRMING THE DIAGNOSIS** Coronary angiography is considered the gold standard for confirming the diagnosis of SCAD.

**MEDICAL TREATMENT** Arterial tear that characterize SCAD generally heal by themselves overtime. Within 4 to 6 weeks, no evidence of the dissection can be seen in majority of the patients. For this reason, the primary treatment for SCAD is medical management with aspirin and beta blockers with the goal of controlling blood pressure and heart rate.

There is some evidence that statin drug and angiotensin converting inhibitors ( like Lisinopril) or Angiotensin receptor blockers ( like Losartan) may be helpful. Platelet inhibitors like Plavix, Brillinta or Prasugrel may be prescribed in some patients.

Angioplasty and Stenting are not considered a standard treatment, since studies have shown that failure rates were higher with this procedures. These procedures and coronary bypass surgery are considered only for selected patients.

**FOLLOW UP OF PATIENTS WITH SCAD** All patients with SCAD needs to be followed by cardiologist and vascular medicine specialists. They all need to have CT Angiography to make sure that they don't have any abnormalities in the blood vessels of the rest of your body, such as brain aneurysm.

Most experts, recommend avoiding extreme endurance training, exercising to exhaustion, competitive sports, and activities acquiring significant Valsalva maneuvers or straining. However, regular moderate intensity exercise is encouraged.

**Bottom line-** SCAD was an overlooked condition, even 10 years back. Often patients were told., you are a fluke or you are the only patient I have with this diagnosis. But awareness has improved and more and more people, especially younger ones are found to have this diagnosis.

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