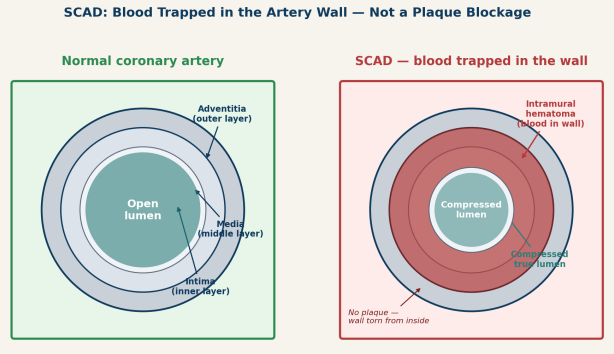
Spontaneous Coronary Artery Dissection

SCAD — A Tear Inside the Heart Artery Wall

SCAD causes a heart attack without plaque. It mostly affects younger women — and most people heal with conservative care.



Online: https://go.riasalimd.com/scad-guide

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Names & Terms You Will Hear

Term	Meaning
SCAD (Spontaneous Coronary Artery Dissection)	A tear that forms inside the wall of a heart artery. Blood leaks into the wall, creating a pocket called an intramural hematoma that squeezes the artery shut from inside. It causes a heart attack, but there is no cholesterol plaque involved.
Intramural hematoma	A pocket of blood trapped in the middle layer (media) of the artery wall. This is the main mechanism of most SCAD — the hematoma presses inward and compresses the channel blood flows through.
Non-atherosclerotic MI	A heart attack that is not caused by plaque. SCAD is the most common cause of non-atherosclerotic MI in women under 60.
LAD (left anterior descending artery)	The most commonly affected heart artery in SCAD — roughly 75% of cases. It supplies the front wall of the heart.
FMD (fibromuscular dysplasia)	An artery wall disease that is not caused by inflammation or plaque. It makes artery walls more prone to tearing. About half of SCAD patients also have FMD in their renal, neck, or gut arteries.
Conservative management	Treating SCAD without a stent. The hematoma usually shrinks on its own within weeks. Watchful waiting plus medicines is often the safest choice. A stent can make the tear worse.
PCI (percutaneous coronary intervention)	A stent procedure. In SCAD, a stent can extend the tear or worsen the hematoma. It is used only when medicines alone are not enough.
OCT / IVUS	Imaging tools used inside the artery. They take pictures from within the vessel wall. These tools confirm SCAD when the dye study is not clear — especially for Type 3 SCAD, which can look like plaque.

Term	Meaning
Peripartum SCAD	SCAD that happens during or just after pregnancy. The weeks after delivery are the highest-risk window. Hormone shifts and physical stress of labor make artery walls more prone to tearing.

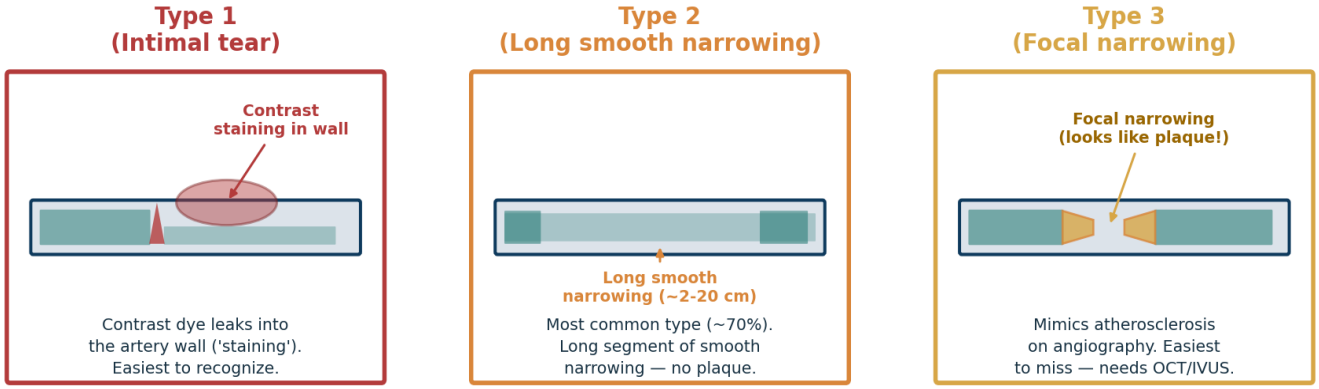
SCAD vs Atherosclerotic Heart Attack — Key Differences

Feature	SCAD	Atherosclerotic ACS
Cause	Tear in artery wall; intramural hematoma compresses lumen	Plaque buildup + rupture + clot blocks lumen
Typical patient	Younger women (30s–50s); no traditional risk factors	Older adults; men; hypertension, diabetes, high cholesterol
Peripartum risk	Highest-risk window — postpartum especially	Not specifically elevated in peripartum period
PCI (stenting) approach	Avoided if possible — can extend tear or worsen hematoma	First-choice treatment for STEMI / high-risk NSTEMI
Statin use	Only if concurrent atherosclerosis or elevated Lp(a)	High-intensity statin for all — cornerstone of secondary prevention
Recurrence risk	~10–15% at 5 years; triggered by pregnancy, extreme exertion	~10–15% MACE at 1 year; driven by plaque progression
Artery healing	Most heal spontaneously within weeks; repeat angiogram at 4–6 wk	Stent remains; long-term antiplatelet to prevent in-stent clot

Spontaneous Coronary Artery Dissection?

- SCAD is a heart attack caused by a tear inside the wall of a heart artery — not by cholesterol plaque.
- Blood leaks into the artery wall, forming a pocket called an intramural hematoma. This pocket squeezes the channel shut from inside.
- Symptoms are the same as any heart attack: chest pain or pressure, shortness of breath, sweating, nausea, or pain in the arm, jaw, or neck.
- SCAD is most common in women — roughly 85 to 90% of cases. It often affects women in their 30s to 50s.
- The postpartum period (weeks right after delivery) is the single highest-risk window for SCAD.
- About half of SCAD patients also have fibromuscular dysplasia (FMD) — a condition that makes artery walls more prone to tearing.
- The three main angiographic patterns (Types 1, 2, and 3) describe what the tear looks like on the dye study. Type 3 can be mistaken for plaque.
- Most SCAD cases heal on their own. Arteries frequently return to normal within weeks to a few months.

Three Angiographic Types of SCAD — What the Dye Picture Shows



The three angiographic types of SCAD describe what the dye study shows. Type 2 (long smooth narrowing) is most common (~70%); Type 3 mimics atherosclerosis and requires OCT or IVUS to confirm.

SCAD is not caused by cholesterol or plaque. If you have had a SCAD heart attack, you do not necessarily have 'heart disease' in the traditional sense. But you do need a cardiologist experienced with SCAD — because the medicines, the follow-up, and the restrictions are different from standard heart-attack care.

Why It Matters

- SCAD causes real heart-muscle injury — troponin rises and the ECG may change, just like any heart attack.
- Because the cause is different from plaque blockage, the treatment is different too. PCI (stenting) can make things worse in SCAD.
- Missing the diagnosis is dangerous — Type 3 SCAD looks like atherosclerosis on angiography and can be mismanaged without intracoronary imaging.
- Recurrence risk is about 10 to 15% over 5 years. Knowing your triggers — pregnancy, extreme exertion, Valsalva — helps reduce that risk.
- FMD affects other arteries too. A full-body vascular screening after SCAD can catch aneurysms or dissections in renal or cervical arteries before they cause problems.
- SCAD disproportionately affects otherwise-healthy young women. The psychological impact — anxiety, PTSD, depression — is real and deserves the same attention as the physical recovery.

Risk Factors

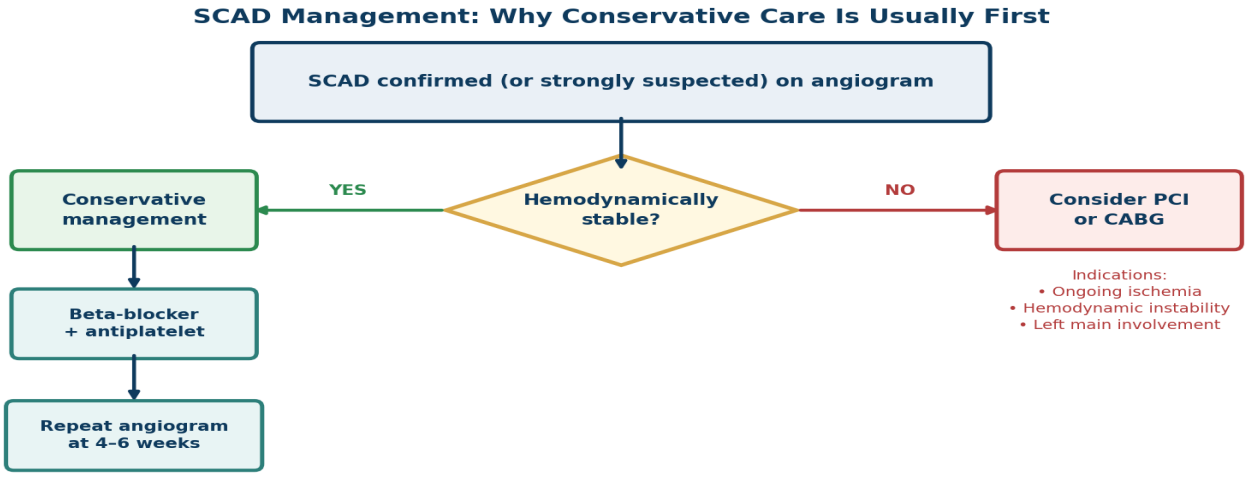
Some patients are more likely to develop this condition. Knowing your risk helps your care team take extra precautions.

Risk Factor	Why It Increases Risk
Female sex	About 85 to 90% of SCAD cases occur in women. Hormones likely affect artery wall strength and connective tissue in ways that raise this risk.
Peripartum period	The weeks after delivery are the highest-risk window. Hormone shifts, more blood volume, and the stress of labor all weaken artery walls.
Fibromuscular dysplasia (FMD)	About half of SCAD survivors also have FMD in at least one other artery. FMD causes abnormal wall structure that makes tearing more likely.
Extreme physical exertion	Intense exercise — heavy weightlifting or hard endurance events — raises pressure inside the artery and can trigger a tear.
Intense emotional stress	Sudden strong emotion — shock, anger, grief — can spike artery pressure and set off a SCAD event.
Connective tissue disorders	Marfan syndrome and vascular Ehlers-Danlos syndrome affect artery wall structure and raise the risk of tearing.
Younger age (30s to 50s)	SCAD most often affects younger adults — often with no history of high blood pressure, high cholesterol, or diabetes.
Straining (Valsalva)	Severe vomiting, bowel straining, or heavy lifting create sharp pressure spikes inside the artery that can start a tear.

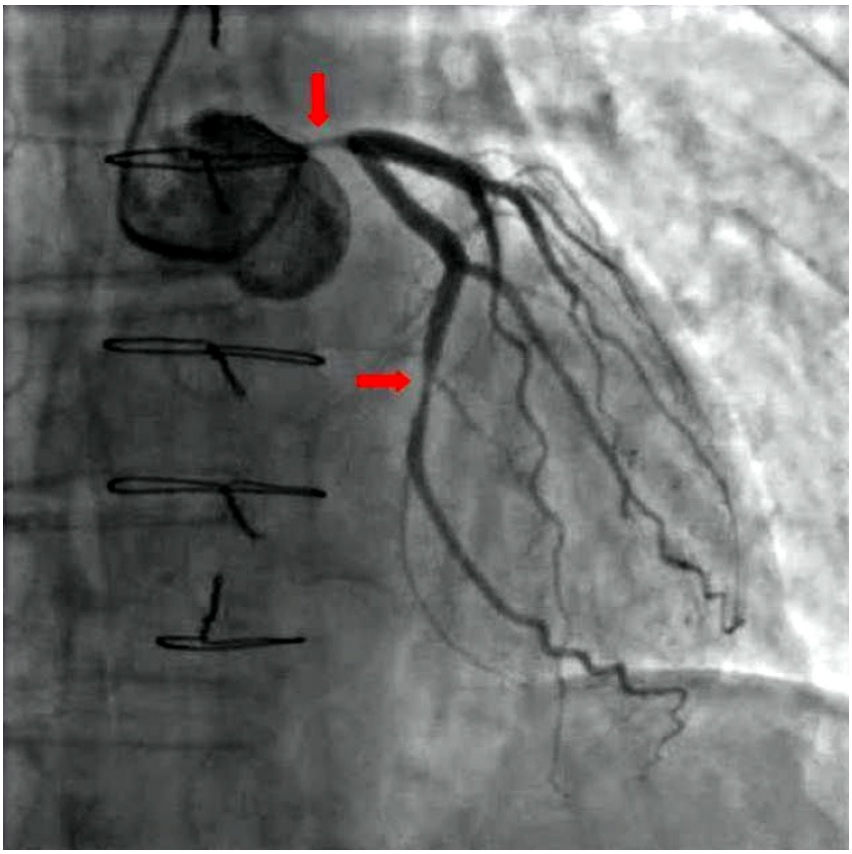
FMD Connection: About half of SCAD survivors have fibromuscular dysplasia (FMD) in other arteries — renal, cervical, or mesenteric. FMD can cause aneurysms or dissections elsewhere in the body if undetected. Ask your cardiologist about a full-body vascular CT angiogram screening.

Treatment Options

- SCAD is usually managed conservatively — medicines and close monitoring, without a stent. Most tears heal on their own.
- Beta-blockers are the cornerstone medicine. They lower heart rate and blood pressure, reducing stress on the healing artery wall.
- Antiplatelet medicines (often aspirin alone, or with a second agent) help protect against clotting at the tear site.
- Statin medicines are used only if there is concurrent atherosclerosis — they are not routinely given for SCAD itself.
- A repeat angiogram at 4 to 6 weeks confirms whether the artery has healed. Most do.
- PCI (stenting) or CABG (bypass surgery) is reserved for specific high-risk situations: ongoing ischemia despite medicines, hemodynamic instability, or left-main artery involvement.
- Cardiac rehab is recommended after SCAD — but the program is modified. High-resistance weight training is avoided during healing.
- Full-body vascular screening (CT angiography of the renal and cervical arteries) is recommended to look for FMD or aneurysms in other vessels.
- Future pregnancy after SCAD requires specialized counseling. The risk of recurrence during pregnancy is significant and must be weighed carefully.



For most SCAD patients who are hemodynamically stable, conservative management — medicines without a stent — is the safest first choice. PCI carries extra risk of extending the dissection.



A real coronary angiogram showing a high-grade narrowing in the LAD artery — the kind of narrowing that SCAD can produce. Unlike the plaque-based lesion shown here, SCAD narrowing is caused by a hematoma in the artery wall and often heals without a stent. Image credit: Pantaleo et al. via Wikimedia Commons (CC BY 2.0).

SCAD in Pregnancy — Do Not Go It Alone. Future pregnancies after SCAD carry a real risk of recurrence. The weeks after delivery are the highest-risk window. Talk to a SCAD-experienced cardiologist *and* a high-risk pregnancy specialist before becoming pregnant. Do not make this decision without your care team.

Risks, Benefits, and Alternatives

Every choice has trade-offs. Use this table to start the shared decision conversation.

Option	Risks	Benefits	Alternatives
Conservative management (medicines, no stent) for stable SCAD	The artery stays narrowed while the hematoma shrinks. Chest pain can return and must be reported right away.	The hematoma usually shrinks within weeks. Most arteries return to normal. Avoids the risk that a stent makes the tear worse.	PCI or CABG if chest pain continues or blood pressure drops despite medicines.
PCI (stent) for SCAD	Risk of extending the tear or worsening the hematoma. Closing side branches is also possible. Success rates are lower than for plaque blockages.	Can restore blood flow quickly when medicines alone are not enough.	Close hospital monitoring on medicines first. Bypass surgery if the anatomy does not allow a stent.
Beta-blocker therapy after SCAD	Side effects include tiredness, cold hands, and trouble exercising — especially in younger, active patients.	Lowers heart rate and wall stress. Helps the healing artery. May lower the chance of another SCAD event.	Talk to us about dose if side effects are limiting. Do not stop on your own.
Full-body vascular imaging (CT scan) for FMD	Radiation from CT. Small risk from contrast dye (kidney and allergy).	Finds FMD, aneurysms, or tears in kidney or neck arteries before they cause a stroke or rupture.	Ultrasound of neck and kidney arteries if CT is not an option.
Pregnancy after SCAD	Real risk of another SCAD event, especially in the weeks after delivery. Needs close cardiology and high-risk pregnancy follow-up.	Many women have had successful pregnancies after SCAD with expert care. The choice belongs to the patient and her care team.	Other paths to parenthood are an option. Talk with us before deciding.

Common Misconceptions

Myth	Reality
SCAD only happens to older people with heart disease.	SCAD most often affects younger women — often in their 30s and 40s — who have none of the usual heart-disease risk factors like high cholesterol, diabetes, or smoking.
A stent is always the right treatment for a heart attack.	For atherosclerotic heart attacks, a stent usually is the right move. For SCAD, stenting can make things worse — the procedure can extend the tear or worsen the hematoma. Conservative treatment is preferred.
If I had SCAD once, exercise is always dangerous.	Moderate exercise is actually encouraged after healing — it is part of cardiac rehab and important for long-term health. The restriction is on high-intensity exertion and heavy resistance training during recovery, and at very high levels thereafter.
SCAD is the same as a regular heart attack.	The end result — heart muscle injury — is similar. But the cause, the management, the medicines, and the long-term plan are different. SCAD requires a cardiologist experienced with non-atherosclerotic causes of MI.
SCAD patients have no recurrence risk.	Recurrence is real — about 10 to 15% over 5 years. Triggers include future pregnancy (especially postpartum), extreme physical exertion, and valsalva events. Knowing your triggers matters.
Feeling anxious or depressed after SCAD is a sign of weakness.	Anxiety, PTSD, and depression are very common after SCAD — in part because it strikes younger, otherwise healthy people who had no warning. These are recognized, treatable parts of SCAD recovery, not character flaws.

Myth	Reality
Statins are needed after SCAD.	Statins lower cholesterol and prevent atherosclerosis — but SCAD is not caused by cholesterol. Statins are given after SCAD only if there is also concurrent atherosclerosis or elevated Lp(a). Ask your cardiologist.

Possible Complications

Knowing what can go wrong helps you spot problems early. Most complications are uncommon, especially with treatment.

Where / What	What Can Happen
Heart-muscle injury (heart attack)	The compressed artery cuts off blood to the heart muscle. Most SCAD heart attacks are moderate in size. Larger areas of injury reduce pumping strength.
Reduced heart pumping	When a large area of muscle is injured, the heart may pump less strongly. Most SCAD survivors recover good function as the artery heals.
Dangerous heart rhythms	Injured muscle can trigger fast or irregular rhythms — especially in the first hours. The hospital monitor watches for these and treats them fast.
Tear extends further	In rare cases the tear spreads farther down the artery. This can happen on its own or as a result of a stent procedure. It blocks more territory.
Recurrent SCAD	About 10 to 15 out of 100 patients have another SCAD within 5 years. It can affect the same artery or a different one. Triggers include pregnancy, extreme exertion, and severe straining.
Problems in other arteries from FMD	FMD that is not found can cause a bulge or tear in kidney or neck arteries. This can lead to high blood pressure, stroke, or other serious events.
Anxiety, PTSD, and depression	Mood changes after SCAD are common and often go unnoticed. They are treatable. We screen for them at every follow-up visit.

Points to Know

If you remember nothing else, remember these key points.

- SCAD is a tear inside the artery wall — not a plaque blockage. The treatment plan is different from a typical heart attack.
- Call 911 for any new chest pain, pressure, shortness of breath, or the feeling that something is wrong — especially in the months after SCAD.
- Most SCAD arteries heal on their own. A repeat angiogram at 4 to 6 weeks confirms healing.
- Beta-blockers are usually the main medicine after SCAD. Do not stop them without talking to your cardiologist.
- About half of SCAD patients have FMD in other arteries. Ask about full-body vascular screening.
- Avoid high-resistance weight training and extreme exertion until your cardiologist clears you.
- Future pregnancy after SCAD is a high-stakes decision. Discuss it with a cardiologist and maternal-fetal medicine specialist before becoming pregnant.
- Anxiety, PTSD, and depression are common after SCAD. Counseling and support — including the SCAD Research community (scadresearch.org) — can help.
- SCAD can recur. Report any new chest symptoms immediately. Triggers include extreme exercise, severe straining, and the postpartum period.
- Tell all future providers you have had SCAD — not just a 'heart attack.' The distinction changes how you are managed.

When to Call Us - and When to Call 911

If you are not sure, call. We would rather hear from you twice than miss a real problem.

- New or returning chest pain, pressure, or tightness — call 911.
- Shortness of breath at rest, new rapid or irregular heartbeat, or fainting — call 911.
- Within the first weeks of recovery: any chest discomfort, even mild, should be reported the same day — call our office or the emergency line.
- Sudden severe headache, neck pain, or vision changes — these can signal a dissection in a cervical artery (related to FMD) — call 911.
- Flank pain or high blood pressure spikes — may indicate a renal artery issue — call us.
- Severe anxiety, PTSD symptoms, or depression that is interfering with daily life — call us for a referral. This is part of SCAD recovery.
- Before becoming pregnant after SCAD — do not make this decision without first scheduling a counseling visit with our office.
- Any question about exercise, return to work, sexual activity, or travel — call us. There are clear answers for each.

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Trusted Resources

The links below are the trusted resources Dr. Ali used to write this guide and that he recommends you visit for more information. Each is a clickable link in the digital version and a Short.io tracked URL on the printed version.

- SCAD Research — Patient Community and Registry - The leading SCAD patient advocacy organization. Peer support, research updates, and a network of SCAD survivors. Strongly recommended for all SCAD patients.
- American Heart Association — SCAD - AHA patient page covering SCAD symptoms, risk factors, FMD, and recovery.
- Cleveland Clinic — SCAD - Plain-language overview of SCAD causes, diagnosis, and management.
- Mayo Clinic — SCAD - Symptom-focused overview with risk factors and treatment options.
- NLM MedlinePlus — SCAD - US National Library of Medicine plain-language summary of SCAD.
- AHA — 2020 Scientific Statement on SCAD - The primary clinical guideline on SCAD — for patients who want the full evidence.

Sources Used to Build This Guide

Every recommendation in this guide is grounded in one or more of the studies, guidelines, or trusted resources below. Short links are tracked so Dr. Ali can see which references patients are reading; nothing personally identifying is captured.

- 2020 AHA Scientific Statement on SCAD (Hayes et al.) *[Guideline]*
  Primary authoritative reference for SCAD epidemiology, angiographic classification, management, and recurrence risk.
- Cleveland Clinic — Spontaneous Coronary Artery Dissection (SCAD) *[Patient Education]*
  Plain-language patient overview of SCAD symptoms, causes, and management.
- Mayo Clinic — Spontaneous Coronary Artery Dissection (SCAD) *[Patient Education]*
  Symptom and risk-factor framing for lay audiences; FMD and pregnancy association.
- SCAD Research — Patient Community and Registry *[Patient Support]*
  Primary patient advocacy and support organization for SCAD survivors; registry data on recurrence.
- AHA — Fibromuscular Dysplasia and SCAD *[Patient Education]*
  AHA patient page on SCAD including FMD association and recovery guidance.
- Pregnancy-Associated SCAD — JAHA Review *[Clinical Review]*
  Peripartum SCAD epidemiology, distinguishing features from peripartum cardiomyopathy, and counseling for future pregnancies.
- NLM MedlinePlus — SCAD *[Patient Education]*
  US National Library of Medicine plain-language overview.

About This Guide

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Reviewer note: Reviewed against Cleveland Clinic, Mayo Clinic, and AHA SCAD patient pages. This guide adds a two-panel artery wall cross-section showing the SCAD tear mechanism. It adds a 3-panel angiographic type schematic. It adds a conservative-vs-PCI decision flowchart. It adds a SCAD vs plaque ACS comparison table. It includes an FMD callout and a pregnancy warning.

Disclaimer

This guide is for educational purposes only and does not replace medical advice from your physician. Recommendations may not apply to every patient. Always follow the specific instructions of Dr. Ali and your care team. In an emergency call 911 or go to the nearest emergency department.

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