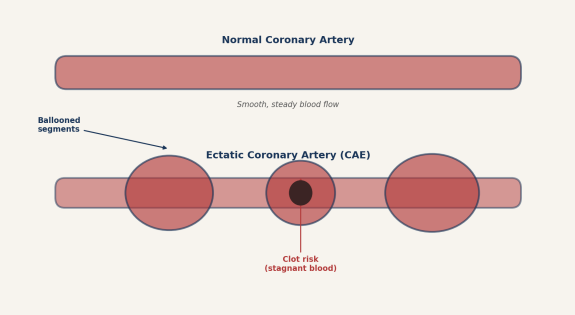
Understanding Coronary Artery Ectasia

When the heart's arteries get too wide instead of too narrow

Rare. Not just an aneurysm. Treated with blood thinners, not stents.



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

Rias KS Ali, MD FACC

Board Certified in Interventional Cardiology & Cardiovascular Disease

4740 Mile Stretch Drive, Holiday FL 34690 | Office: (727) 943-5200 | Fax: (727) 943-5201 | RiasAliMD.com

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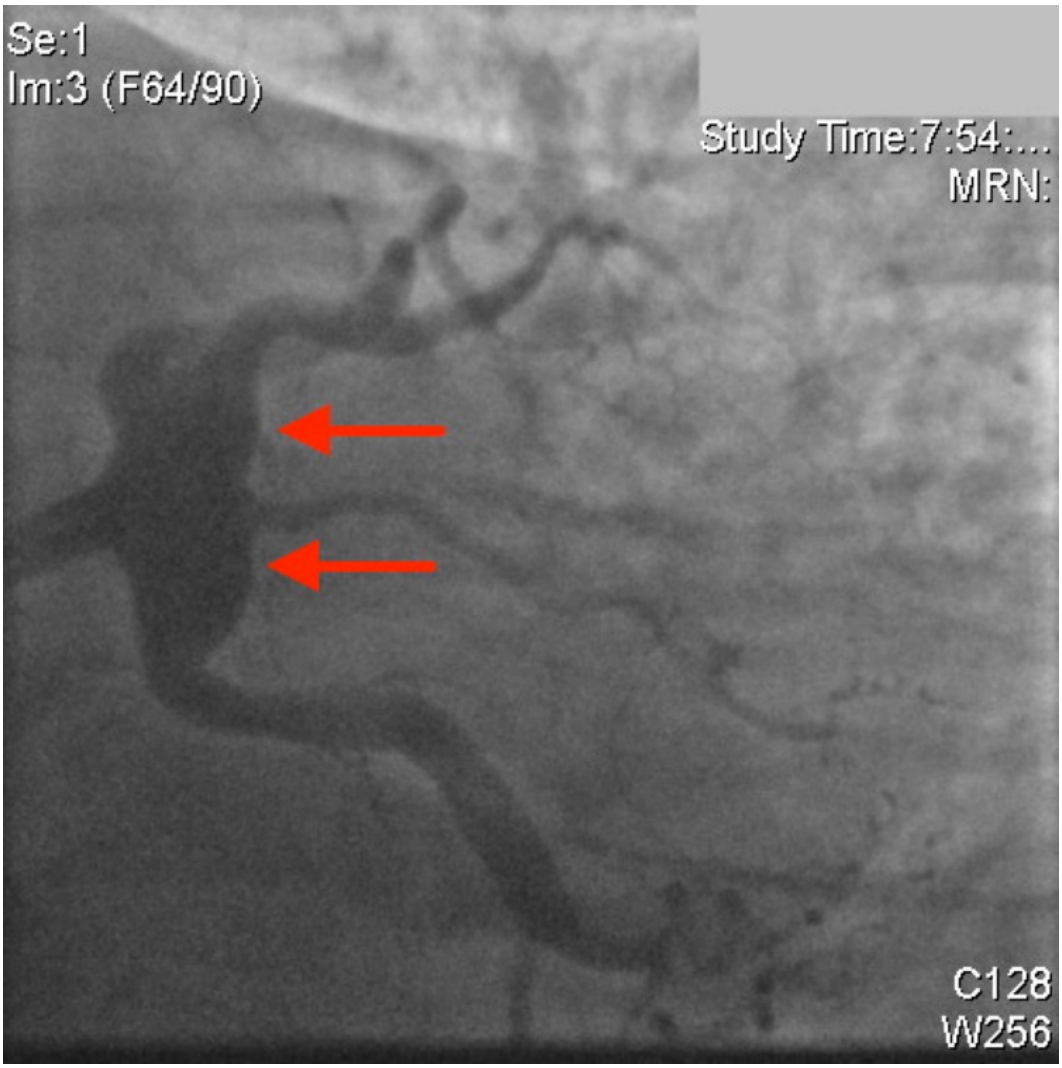
Names & Terms You Will Hear

Term	Meaning
Coronary artery ectasia (CAE)	The full name. It means wide spots in a heart artery.
Coronary aneurysm	A balloon-shaped bulge in one spot, not a long stretch.
Diffuse coronary ectasia	Wide spots in more than half of one or more arteries.
Focal aneurysm	A single pouch, like one big bubble.
CAE with plaque	Most CAE happens with some plaque. Pure CAE alone is less common.
Markis classification	Type 1 is the worst (many arteries). Type 4 is the mildest (one small bulge).
Masquerade syndrome	A heart attack with open arteries. The cause is slow flow and a clot in the bulge.

What Is Coronary Artery Ectasia?

- Coronary ectasia means a heart artery becomes at least 1.5 times wider than the nearby normal part. Think of a garden hose with a bulge.
- It is not common. About 1-5% of people who get a coronary angiogram have it.
- The wide part can be a long stretch (ectasia) or a single spot (aneurysm). Both act the same in care.
- It often comes with regular plaque. About 80% of CAE patients also have plaque in other vessels.
- The wide part itself is not the danger. Blood pools and swirls inside the bulge. That slow flow can form clots that block smaller branches.



A real coronary angiogram showing severe ectasia. The red arrows point to the ballooned, aneurysmal segment of the left coronary system, wider than the normal vessel just above it. Image: Venuti and Mangano, Cureus 2022 (CC BY 4.0).

Why It Matters

- CAE can cause a heart attack even when the arteries are not blocked. Slow flow plus a clot in the bulge is the 'masquerade' MI.
- Balloons and stents usually do NOT work for CAE. There is nothing to push open. Stents are hard to size to a wide spot.
- The right care is medical. That means blood thinners, a statin, and risk-factor control. Stents are saved for select cases with a true narrowing.
- Many patients live well for years on the right pills. The biggest risk is missing the diagnosis or treating it like normal plaque.
- CAE often comes with wide spots in other vessels too. So a one-time aorta scan is worth doing.

Treatment Options

- Two antiplatelet pills (aspirin plus clopidogrel or aspirin plus ticagrelor) are the base. Two thinners block the clot risk better than one.
- High-dose statin (atorvastatin 40-80mg or rosuvastatin 20-40mg). It steadies the artery wall and calms inflammation.
- An ACE inhibitor or ARB. It protects the vessel lining. This is key if you also have high BP or diabetes.
- A beta-blocker. It helps with chest pain and slows the heart rate. That helps flow through the bulge.
- A blood thinner (warfarin or a DOAC like apixaban or rivaroxaban). Used when the two antiplatelets are not enough, when there is a clot in the bulge, or in very severe CAE.
- Bypass surgery is saved for true aneurysms with a high rupture risk. Or when several arteries are involved with blockage.
- Risk-factor control. Keep BP under 130/80. Keep A1c under 7%. Stop smoking. Stay at a healthy weight.

Risks, Benefits, and Alternatives

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

Option	Risks	Benefits	Alternatives
Two antiplatelet pills (aspirin plus P2Y12 inhibitor)	Bleeding risk (gut, brain). Bruising. May need to pause before some procedures.	Cuts heart attack and stroke risk vs aspirin alone in CAE. Targets the clot risk. Pills. Well-studied.	Aspirin only (less effective in CAE). A DOAC (more bleeding, used when two pills fail).
Adding a blood thinner (DOAC or warfarin) to aspirin	Big rise in major bleed risk (about 2-3x). Drug and food interactions. Warfarin needs blood checks.	Better protection in severe CAE or when a clot is seen in the bulge. May allow stopping the P2Y12 pill later.	Stay on two antiplatelets only (less bleeding). Bypass surgery for select aneurysms.
Stenting a wide segment	The stent is often too small for the wide vessel. The stent fits poorly. Clot risk is high. Long-term results are poor.	Used only when there is a true narrow spot in or next to the wide part. Not for pure widening.	Medical therapy (preferred). Surgery for high-risk aneurysms.
Bypass surgery for an aneurysm	General anesthesia. Chest opened. 4-6 week recovery. Risk of stroke, MI, bleeding, infection.	Best fix for large aneurysms at risk of rupture or clot. It bypasses the bad part.	Medical therapy (default). Covered stent through a catheter (select cases).

Common Misconceptions

Myth	Reality
Wide arteries are better than narrow ones.	Wide arteries do not deliver oxygen better. They deliver it worse. Blood pools and swirls. Slow flow plus clots is the core problem.
A heart attack means my arteries must be blocked.	With CAE, you can have a full heart attack with open arteries. The clot forms in the bulge and travels downstream.
If a stent fixes other heart problems, it will fix this too.	Stents push open narrow spots. They do not work well in wide spots. There is nothing to push open. Medical care is safer and lasts longer.
Once my symptoms are stable, I can stop the blood thinners.	The wide spot does not heal. Stopping the pills often leads to a clot and a heart attack within weeks. Lifelong therapy is the norm.
Coronary ectasia is the same as a coronary aneurysm.	They are close. Ectasia is a long stretch of widening. An aneurysm is a single pouch. Aneurysms hold bigger clots and sometimes need surgery. Ectasia is more often managed with pills.
If my CT angiogram missed it once, I can ignore it.	CT scans catch most CAE. Very mild cases can be missed. If you have chest pain with normal arteries on a stress test, ask if CAE could be the cause.
Lifestyle does not matter if I am on the right pills.	Tobacco, high BP, and high blood sugar speed up the inflammation that worsens CAE. Lifestyle is as key as the pills.

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 attack ('masquerade MI')	A clot forms in the wide spot. It travels downstream and blocks a smaller branch. You get a heart attack even though the main artery looks open.
Coronary spasm	The bad wall is prone to spasm. That can cause sudden chest pain or an MI. Calcium channel blockers often help.
Aneurysm rupture	Rare but very dangerous. More likely in pouches over 2 cm than in a long stretch.
Tiny clots downstream	Small clot bits break off the bulge. They lodge in tiny vessels. This can show up as chronic chest pain or a falling EF over time.
Bleeding from blood thinners	Gut bleeding is most common. Brain bleeding is rare but most feared. Treat reflux and ulcers. Avoid NSAIDs. Limit alcohol.
Weakening of the heart muscle	Repeated tiny clots can weaken the heart over years. A yearly echo catches this early.

Points to Know

If you remember nothing else, remember these key points.

- Coronary angiogram is the best test. CT angiogram is a good non-invasive option.
- The Markis Type (1-4) on your report shows how bad the CAE is. Type 1 (many vessels) has the highest risk.
- Take both antiplatelet pills every day. Same time. Missed doses are the top cause of preventable events.
- Tell every dentist, surgeon, and ER doctor about your blood thinners BEFORE any procedure. Some need to pause. Some do not.
- Stay on your statin even if your LDL looks great. Statins do more than lower LDL. They steady the artery wall.
- Get a one-time belly aorta ultrasound. CAE comes with aortic aneurysms in about 10% of cases.
- Follow-up scans every 1-2 years catch any change early.
- If you have new chest pain, especially with exertion, do not wait. Call us or go to the ER that day.

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.

- **Call us today or go to the ER** for new chest pain, pressure, or tightness, especially with activity.
- **Call 911** for bad chest pain, hard breathing, or fainting. This may be a heart attack from a clot in the wide segment.
- **Call us right away** for bleeding that does not stop with 10 minutes of pressure. Same for blood in stool or urine, vomiting blood, or a sudden bad headache while on blood thinners.
- **Call us this week** for unexplained bruises larger than a quarter or unusual nosebleeds.
- **Call us first** before any dental work, colonoscopy, or surgery. We will help with your blood thinner plan.
- **Call us** before deciding what to do if you miss a dose of aspirin or clopidogrel.
- **Call 911** for sudden severe back, belly, or flank pain. This could mean the aorta is involved.
- **Call us** if you are pregnant or planning a pregnancy. Some of these pills must change.

Office: (727) 943-5200

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.

- British Heart Foundation — Coronary Artery Ectasia - Patient-friendly Q&A; on diagnosis and monitoring.
- Cleveland Clinic — Coronary Artery Aneurysm - Overview of ectasia/aneurysm, complications, and treatments.
- American Heart Association — Coronary Artery Disease - Background context on coronary anatomy and risk factors.
- CardioSmart (ACC) — Coronary Artery Disease - American College of Cardiology patient-facing CAD library.

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.

- Markis et al — Clinical significance of coronary arterial ectasia (Am J Cardiol 1976) *[Guideline]*
  Original Markis Type 1-4 classification still in use today. Anchors severity grading in the guide.
- Swaye et al — Aneurysmal coronary artery disease (CASS Registry, Circulation 1983) *[Clinical]*
  Prevalence data (1-5% of cath patients), comorbidity profile, and outcomes from the largest historical registry.
- Antoniadis et al — Pathogenetic mechanisms in coronary artery ectasia (Cardiology 2008) *[Clinical]*
  Mechanism review: wall thinning, atherosclerosis link, inflammatory mediators. Frames the what-is and why-matters sections.
- Doi et al — Dual antiplatelet vs single antiplatelet in CAE (J Cardiol 2021) *[Clinical Trial]*
  Evidence base for dual antiplatelet therapy as first-line; informs treatment and RBA sections.
- ICR Journal — CAE and ACS: Role of NOACs (Interv Cardiol Rev 2022) *[Clinical]*
  Modern review of when to escalate from DAPT to anticoagulation in severe CAE. Informs RBA row on anticoagulation.
- British Heart Foundation — Coronary Artery Ectasia (Patient Q&A;) *[Clinical]*
  Patient-friendly framing of monitoring frequency and lifestyle.
- Cleveland Clinic — Coronary Artery Aneurysm *[Clinical]*
  Reference for distinguishing focal aneurysm from diffuse ectasia in the synonyms and what-is sections.
- Boles et al — Coronary artery ectasia: remaining questions (J Am Coll Cardiol 2016) *[Clinical]*
  Modern JACC review covering imaging, masquerade syndrome (MI without blockage), and surveillance gaps.

About This Guide

Rias KS Ali, MD FACC | Board Certified in Interventional Cardiology & Cardiovascular Disease

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Reviewer note: Reviewed against BHF, Cleveland Clinic, and JACC reviews. Ours adds: explicit Markis Type 1-4 grading, the 'masquerade syndrome' explanation (MI without blockage), side-by-side diagram of normal vs ballooned artery, and a clear dual-antiplatelet vs anticoagulation decision framework.

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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