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AHA's New Guidance for CAD with DM

Highlights of Scientific Statement from American Heart Association for Stable Coronary Artery Disease with Type 2 Diabetes Mellitus

Recent scientific studies have shown that people with coronary artery disease (CAD) and concomitant type 2 diabetes mellitus (T2DM) may require more aggressive or different medical and surgical treatments compared to people with CAD without concomitant T2DM.

Lowering blood glucose to a certain level is not sufficient. There are now more options

for controlling glucose in people with T2DM, and each patient should be evaluated for their personal risk of cardiovascular disease (CVD), stroke and kidney disease.

In an effort to help guide clinicians to provide optimal care to patients, the **American Heart Association (AHA)** has released a new

scientific statement that provides an overview of advances in care for patients with both CAD and T2DM.

Some notable updates from this scientific statement are highlighted in this issue.



For full text click link:

<https://www.ahajournals.org/doi/10.1161/CIR.0000000000000766>

Anti-thrombotics: Balancing the Thrombotic & Bleeding Risk

Underlying issue: T2DM is a generalized prothrombotic state caused by both altered coagulation and altered platelet function.

DAPT: Long-term therapy with **Clopidogrel** in addition to **Aspirin** is an option in select patients with stable CAD and T2DM, understanding that there should be a balance between decreasing ischemic risks and increasing bleeding risks.

Recently published, **THEMIS** and **THEMIS-PCI** trials compared dual antiplatelet therapy with **Aspirin** and low-dose **Ticagrelor** versus **Aspirin** alone among 19271 patients with T2DM and CAD.

Ticagrelor: had a lower risk of the composite of cardiovascular (CV) death, myocardial infarction or stroke over an average follow-up of 40 months (Ticagrelor vs placebo: 7.7% vs 8.5%; P=0.04).

Notably, the efficacy and net clinical benefit of **Ticagrelor** were more favorable among patients from THEMIS who had a history of percutaneous coronary intervention (PCI).



THEMIS: Effect of Ticagrelor on Health Outcomes in DiabEtes Mellitus Patients Intervention Study

THEMIS-PCI: Ticagrelor in Patients with Diabetes and Stable Coronary Artery Disease with a History of Previous Percutaneous Coronary Intervention

Blood Pressure: Control is Critical

Underlying issue: Coexisting hypertension increases the risk of MI, stroke, and all-cause mortality

A lower BP target might be appropriate in patients with diabetes who are at higher risk of stroke and other microvascular complications, if this can be done without harm.

Promote a blood pressure target of **<140/90** mmHg for all CAD patients and T2DM .

Apply a goal of **<130/80** mmHg in high-risk patients such as blacks, Asians, and those with cerebrovascular disease and other microvascular complications such as chronic kidney disease (CKD).

ACE inhibitors/ARBs: First-line therapy because of decreased CV risk with CAD.

Beta blockers: Should be targeted to patients with clear indications, such as angina or to those who require additional BP lowering beyond other agents.

The majority of patients with hypertension and T2DM will require **>1 antihypertensive medication** to control blood pressure.

Lipids: Time for Burden Reduction!

Underlying issue:

Atherogenic lipid anomalies include hypertriglyceridemia, low HDL-C, and small dense LDL particles

More aggressive steps may be needed to improve the lipid levels in people with T2DM.

Statins: the cornerstone of cholesterol-lowering therapy, may slightly increase blood glucose levels, however, the risk-benefit ratio is clearly in favor of administering statins to people with T2DM and CAD.

As CAD patients with T2DM represent a high-risk group, **additional agents** may be needed for LDL-C lowering beyond statin monotherapy.

The addition of non-statin LDL-C lowering therapies, such as **Ezetimibe** and **PCSK9 inhibitors**, should be considered based on the individual's overall cardiovascular risk profile, personal preferences, and drug access.

The statement also notably included a "first-line" call out for **Icosapent Ethyl (Vascepa)**, a novel agent approved in Dec 2019 for routine use in U.S. patients, including those with CAD and T2DM.

Icosapent Ethyl: To be considered for further CV risk reduction when **triglycerides** remain elevated (>135 mg/dL) despite maximally tolerated statin and lifestyle changes, based on REDUCE-IT trial recommendation from ADA Standards of Medical Care.

Glycemic Control: Target Worth Achieving

Underlying issue:

Hyperglycemia increases CV risk, but impact of glucose-lowering therapies on outcomes is complex, and therapy needs to be individualized.

There are now more options for controlling glucose in people with T2DM, and each patient should be evaluated for their personal risk of CVD, stroke and CKD.

Glycemic Target:

- Reasonable HbA1c goal for many non-pregnant adults is still <7%.

- <8.0% or 8.5% for older patients with comorbidities or at high risk for hypoglycemia; depends on preferences, capacity, and types of treatment used.

Metformin: Remains to be the most frequently recommended first-line therapy for patients with diabetes.

Sulfonylureas and **Insulin:** Can be used cautiously as

glucose-lowering therapies in patients with stable CAD, but should be careful of hypoglycemia and excess weight gain.

SGLT2 inhibitors and **GLP-1 receptor agonists** with established CV and renal benefit are first line, but prescribing patterns depend on familiarity, cost, and access.

Weight Management: Because it is Challenging

Underlying issue:

It is challenging for obese patients with T2DM to lose weight with diet and exercise alone

Lifestyle and health behavior management, including smoking cessation, heart-healthy diet, weight loss (if overweight or obese), sleep and stress management, and exercise/physical activity, remains to be the cornerstone of clinical care both for patients with T2D and those with CAD.

Clinicians should consider referring obese individuals to nutrition or **structured weight loss programs**.

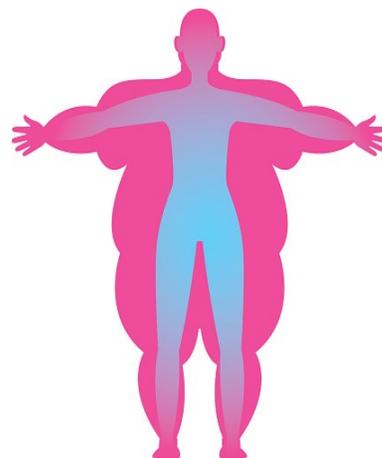
Another notable feature of the statement is the potential it assigns to **bariatric surgery** as a management tool with documented safety and efficacy for improving cardiovascular risk factors.

Despite potential cardiovascular benefits bariatric surgery remains **underused** among eligible patients.

Surgery performed as **Roux-en-Y bypass** or **sleeve gastrectomy** may be another effective tools for CV risk reduction in the subset of patients with obesity,

particularly patients with a **body mass index of at least 35 kg/m²**.

It's not first-line treatment, but it's **an option to consider** and is most beneficial to patients relatively early in the course of T2DM.



For any scientific queries on above topic

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