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Commentary

Enhancing primary cardiovascular prevention in patients with psychiatric disorders: a three-pronged approach

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Abstract

Patients with mental health disorders are at disproportionately greater risk of heart attack and stroke due to accelerated atherosclerotic cardiovascular disease. A three-tiered approach is considered herein to enhance access to primary cardiovascular prevention in clinical practice, reducing the disparity created in part by the stigma associated with psychiatric illness.

Keywords: Primary cardiovascular prevention, Psychiatric disorders

Introduction

As a late-career consultant in internal medicine at a free-standing psychiatric facility, my current goal is to promote a strategy for enhancing primary cardiovascular prevention for patients across the spectrum of mental health disorders. A 3-tier approach is outlined herein to facilitate accomplishing this objective.

Tier 1: Lifestyle Modification

A recent report in the Canadian Journal Cardiology addressed the relationship between modifiable risk factors for cardiovascular disease and major acute cardiac events including sudden cardiac arrest [1]. These findings underscore the importance of primary prevention, revealing that the American Heart Association's Life's Essential 8 factors are strongly related to health risks, including sedentary lifestyle, higher adiposity, higher waist circumference, short sleep duration (less than 7 hours per night) and tobacco use [2]. Psychosocial factors such as depressive symptoms, low mood, and social isolation were also included. Overall, they estimated that between 40 and 63% of sudden cardiac arrests could be preventable by reducing or even fully eliminating these risk factors [1].

Tier 2: Pharmacological Interventions to Reduce Risk for Major Acute Cardiac Events

A predominance of current clinical evidence indicates that lifestyle modifications alone are suboptimal in providing primary preventive measures outlined above. Metabolic syndrome, obesity, and diabetes mellitus are prevalent especially in psychiatric patients with major disorders such as schizophrenia [3] as complications of psychopharmacological agents to treat their primary psychiatric conditions. GLP–1 receptor agonists [4] are emerging as efficacious agents to address these difficulties, regarding them as medical disorders rather than psychological issues. It is imperative for the medical community to lead efforts to make these agents available to appropriate patients, including at reasonable costs and with minimal prescribing difficulties such as requirements for prior approval.

Table 1 Coronary artery calcium scores and the anticipated benefit of enhanced primary prevention with low-dose pre-race aspirin for reducing the risk of marathon-related cardiac arrest

Coronary artery calcium Agatston score levels	Pre-race low-dose aspirin use
0—no coronary plaque burden	Not indicated
1–99—mild disease	Optional
100–399—moderate disease	Recommended
≥400—severe disease	Highly recommended

Figure 1. Reproduced from: Siegel et al. 2023 [5].

Tier 3: Aspirin Use to Minimize the Risk for Sudden Cardiac Death

Initially recommended to reduce the transiently elevated risk for sudden cardiac arrest in marathon runners during races [5,6], aspirin use guided by coronary artery calcium scores was advised for recreational sports active individuals whose risk of exertional cardiac events increases with age [7]. This approach has been subsequently recommended as a standard of care for enhancing primary cardiovascular prevention and primary care practice for individuals at risk as shown by such noninvasive testing.

Atherosclerotic cardiovascular disease remains the #1 cause of death in the United States with more than 200,000 sudden cardiac arrests annually with a fatality rate of 90% [8].

Patients with major psychiatric disorders such as schizophrenia incur a roughly 10-year reduction in total life expectancy due to atherosclerotic cardiovascular disease and are also subject to a 5-fold or greater increase in sudden cardiac death [9,10]. Low-dose aspirin use in the absence of contraindications is indicated to enhance primary prevention in patients shown to be at risk by coronary artery calcium scores greater than 100 Agatston units (see **Figure 1**). Beyond such heightened risk related to genetic predisposition, patients with mental health disorders such as anxiety and depression are also subject to increased cardiovascular risk warranting similar assessments by coronary artery calcium scoring. Persons identified at risk due to subclinical coronary heart disease are candidates for this intervention as above. Such use is supported by two randomized control primary prevention trials and is consistent with guidelines of the American Heart Association and the American College of Cardiology [11–13].

An actionable approach is for psychiatrists to refer patients to their primary care physicians for consideration of this 3-tier approach to primary cardiovascular prevention. Men in their 20s and women perhaps a decade or so older would be appropriate for such evaluations. Were these considerations to be integrated into psychiatric practice at large, persons with mental health disorders would gain greater access to the primary prevention of atherosclerotic cardiovascular disease, which currently is impeded by the stigma associated with such illness. Such referrals would contribute directly to the quality of and access to care for mental health disorders, leveling the playing field in this domain with medical practice at large.

Individuals with mental health disorders are at disproportionately greater risk of heart attack and stroke due to atherosclerotic cardiovascular disease [14]. A 3–tiered approach is outlined above to enhance access to primary cardiovascular preventive measures for patients with mental health disorders, supporting the approach to their equitable access to such care.

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