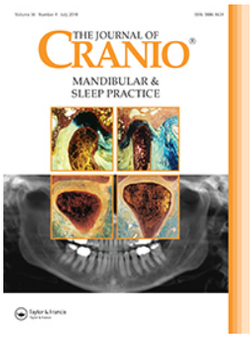

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GUEST EDITORIAL

The BaleDoneen Method (BDM): A disease-inflammation approach to achieve arterial wellness

Heart attacks (HA) have remained the number one cause of death since 1900. Someone in the United States suffers one every 40 seconds and perishes from one every minute. Retirement age is the average time for men to have a HA, with women lagging a few years behind at 72 years of age. Heart attacks rob people, on average,of 17 years of life. Strokes are the top cause of disability. Someone has a stroke every 40 seconds and dies from one every 3 min and 45 seconds. Approximately 55,000 more women than men have strokes annually. The financial burden is also devastating, with the direct and indirect cost of treating cardiovascular (CV) disease being $330 billion in 2014 and projected to be $1.1 trillion in 2035 [1].Virtually everyone reading this article has been touched by these tragic CV events through family members or close friends.

It is well documented that assessment for traditional risk factors, such as cholesterol, fail to identify many individuals who go on to suffer CV events [2].Atherosclerosis (plaque in the arterial wall) is a prerequisite for the clear majority of all heart attacks and ischemic strokes [3]. It frequently is harbored silently in an individual until plaque rupture or endothelial erosion triggers a thrombus. Within seconds, the thrombus can obstruct the flow of blood, resulting in a HA or stroke. 86% of HAs occur in arteries that were at least 70% open just prior to the CV event [4]. Presence of subclinical atherosclerosis has been shown to be a better predictor of CV event risk than risk factors [5]. We have technologies, which can safely and economically detect this silent, but potentially deadly atherosclerotic disease. Regardless of risk factors, the presence of arterial plaque in asymptomatic subjects who are not being treated places them at high-risk. Finding subclinical carotid and or femoral atherosclerosis via ultrasound testing identifies individuals at higher risk for HA, stroke, and CV death. This information can enhance clinical management decisions [6,7]. Therefore, it is logical to base an individual's risk of HA or stroke on a disease platform. The BaleDoneen Method (BDM) is a CV prevention program anchored in assessing all patients for arterial disease, as opposed to risk factors alone.

Inflammation initiates and propagates CV disease (CVD). It also triggers CV events. The controversy about inflammation as the cause of arterial disease is over [8]. The BDM incorporates the assessment and monitoring of arterial inflammation as a critical factor in CVD prevention. Establishing and maintaining arterial wellness requires extinguishing arterial inflammation. This takes a holistic approach, as there are many potential sources of arterial inflammation. Known drivers of inflammation include: lipoproteins, nicotine, hypertension, sleep deprivation, low vitamin D, autoimmune inflammatory diseases, infectious diseases, gut dysbiosis, insulin resistance, poor lifestyle, and oral infection. These conditions can be evaluated in an individual patient and optimal management applied. This type of clinical care has allowed the BDM to guarantee arterial wellness [9]. The standard of care is not this comprehensive, which allows inflammation to smolder frequently, manifesting itself with a CV event. The American Heart Association still does not list oral health as a critical factor for a healthy heart [10]. It was demonstrated several years ago that oral infection, including periapical abscess, may trigger a significant percentage of HAs [11]. More recently, it was published that high-risk periodontal pathogens are a contributory cause of arterial disease [12]. Therefore, it is mandatory to incorporate oral health into any CV prevention program. The BDM promotes collaboration between medicine and dentistry as an essential element. This program recognizes that dentists and hygienists are saving lives and not just smiles. The BDM could not guarantee arterial wellness without excellent oral healthcare providers being involved. Snuffing arterial inflammation is the keystone of the BDM, and that requires excellent oral health.

The BDM incorporates genetics, allowing for precision healthcare. This type of care is now endorsed by the National Institute of Health as well as the US National Research Council [13].The American Heart Association's newest institute is for precision CV healthcare anchored in genetics [14]. Personalized management directed by genetics is the future. The BDM has clinically utilized genetic information for almost two decades. Many of our dental colleagues are now anchoring their work in genetic tests, indicating a patient's tendency to generate inflammation from oral disease [15].Treating to the N of 1, as opposed to an average, optimizes management.

The BDM is creating a paradigm shift in CV prevention. This method has been shown to stabilize, halt, and regress arterial disease [16,17].The finding that the method reduces lipid rich plaque to 0% within five years carries huge significance. Three prospective studies have now shown plaque lipid richness is an independent predictor of heart attacks and strokes [18–20].Our oral healthcare colleagues are playing a significant role in the success of the BDM. It is like Henry Ford stated: "coming together is the beginning; keeping together is progress; working together is success."

The BDM mission is to remove heart attacks from the top of the list of morbidity and mortality by the year 2020. To succeed in our goal, we have developed educational opportunities for all medical and dental providers to become knowledgeable in

the program. We believe all members of the dental team should be intimately involved with the education of the patient in the importance of the oral/systemic connection. We invite dentists, hygienists, dental assistants, educators, and the entire dental team to join us in this mission.

We deliver a live event twice yearly; 17.5-h category 1 CME accredited by the American Academy of Family Practice and 17.5-h Dental CE. We encourage dental providers to come as a team and work together during the two days to absorb the science, discuss ways to implement the information clinically, and leave with a passion for the dental office committed to preventing HAs and strokes. We highly encourage dental and medical collaboration in their individual communities with the aim of eradicating CV events. We believe it is essential that dentistry be included in all medical programs that aim to practice CVD prevention.

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