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Tropical Coronary artery disease and arrhythmogenic potentials

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The rising incidence of CAD is a new phenomenon in developing countries. The increasing burden of coronary artery disease (CAD) in tropical and subtropical belts of the Equator since it remains blurred and carries a grim prognosis. The worldwide burden is set to reach 47 million disability by the year 2020 as projected by World Health Organization. Several Western studies have demonstrated a significant role of various nutrients like fat, saturated fat and cholesterol in the causation of CAD. In contrast, the traditional Indian diet is low in fat content and, therefore cannot be the sole cause for the high prevalence of CAD in Indians. Plaque buildup in endocardium and coronary arteries, causing ischemic injury and arrhythmic episodes, is a vanishing mystery in its pathogenesis and emphasizing alternative routes for understanding and treatment of this enigmatic disease. Recently, an increase in the incidence of CAD was reported from southern states of India and other etiologies, the infectious or inflammatory conditions such as Endomyocardial fibrosis may provide an insight in its analysis. Virchow, first proposed an association between infection and IHD (ischemic heart disease) > 100 years ago. Cardiotropic viruses were first implicated in the pathogenesis of CAD in 1968 when experimental Coxsackie B4 virus infection in mice was shown to produce acute coronary arteritis. Other investigators suggest a link between Coxsackie B virus and coronary artery disease, following a report of myocardial infarction, occurring in two normolipidemic male patients due to an unknown viral illness. Bacterial infection may lead to molecular sequelae that might have effects on the initiation and maintenance of atherosclerotic process. J. The individuals having seropositive for C. pneumoniae and H.pylori, shown to possess elevated levels of fibrinogen, a risk factor for CAD. Antibiotic treatment should slow its progress and early eradication of the organism is important to prevent future cardiovascular events. Recently, evidence of myocardial injury, as defined as an elevated troponin level, is common among patients hospitalized with COVID-19, caused by cardiac microvascular damage and systemic inflammatory response syndrome (cytokine storm) with increased risk of a poor prognosis. Among patients who are diagnosed with COVID-19, there is a broad range for prevalent CAD. rates between 4.2 and 25 percent have been reported, with most series from China. Patient with COVID-19 pneumonia with respiratory failure may not be an optimal candidate to reap the benefit of myocardial reperfusion. The important steps to prevent and decrease the risk of CAD is to reduce the chance of getting this disorder by epidemiological measures with an advice of blood thinning medications such as small daily dose aspirin, statins, nitrates and antibiotics in susceptible individuals.

Biography

Ramachandran Muthiah, Consultant Physician & Cardiologist, Zion hospital, Azhagamandapam and Morning star hospital, Marthandam, Kanyakumari District, India. Completed M.D. in General Medicine in 1996, D.M. in cardiology in 2003 under Tamil Nadu Dr.MGR Medical University, Chennai, India. Worked as medical officer in Rural health services for 5 years and in teaching category as Assistant Professor at Madras medical college, Coimbatore medical college, Thoothukudi medical college and Professor at Dr.SMCSI Mission hospital & Medical college, Karakonam, Trovandrum and Azeezia Medical college, Kollam. Published many papers in Cardiosource, American College of Cardiology Foundation, Case Reports in Clinical Medicine (SCIRP) and Journal of Saudi Heart Association. Special research on Rheumatic fever and Endomyocardial fibrosis in tropical belts, Myxomas, Ineffective endocarditis, apical hypertrophic cardiomyopathy, Ebstein's anomaly, Rheumatic Taussig-Bing Heart, Costello syndrome and Tetralogy of Fallot.

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