

Editor's Note: Journal of Clinical & Experimental Cardiology (Volume 8, Issue 3)

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Editor Note

Cardiovascular diseases are the leading cause of mortality in almost all parts of the world. A recent global survey results indicated that, the annual global death toll of people succumbing to cardiac diseases is around 17.3 million and it is expected that it will keep on rising with an unprecedented speed [1]. These statistical figures alone speak of the potential threat of cardiovascular diseases posing on global population health. The abrupt rise in the figures is attributed to the changing lifestyle that has limited the time and scope for people to concentrate on their physical and mental health. Furthermore, most people especially those residing in the cities lead a sedentary life style. This not only instigates the inception of cardiac health problems but also worsens the conditions of existing patients. Researchers and scientists across the globe are therefore focused on studying the various genetic, environmental and lifestyle factors that, contribute to the occurrence of cardiac diseases. Additionally, many medical researchers are dedicated to finding a cure for various acute and chronic cardiovascular diseases. Journal of Clinical & Experimental Cardiology is dedicated to the publication of current research developments that are directly or indirectly related to the diagnosis, treatment and final clinical outcome of patients suffering with cardiovascular complications. The current issue (Volume 8, Issue 2) of the journal has published many research articles that showcased recent developments related to identification and clinical application of molecular biomarkers for detecting and monitoring cardiac diseases in real time. Furthermore, the issue also published many articles that highlighted the correlations between prevalent chronic diseases and cardiovascular complications. Some of the most important articles published in this issue are discussed below.

The article published by Vaze et al. [2], presented a novel study that investigated the correlations between the physiological concentrations of miRNAs 125a-5p and 10b as well as miRNAs 60, 30a-3p and 199b; and onset or recurrence of atrial fibrillation. The authors studied 83 atrial fibrillation patients. They did extensive analysis of the variations in the concentration of 86 cardiac miRNAs pre and post ablation and deduced the possible genetic factors (miRNAs) that act as biomarkers of recurrence of the disease. The information presented in the article can be used for the standardization of molecular diagnostic tools that can help in making fast and effective diagnosis of atrial fibrillation.

The complexity in diagnosis and treatment of cardiac diseases lies in the fact that, cardiac diseases encompass a host of complications, each with its own specified prognosis and treatment method. While some are acute and has less scope of complete recovery, others can be cured and prevented. Rheumatic heart disease (RHD) is one such disease that was highlighted in the article published by Prasad et al. [3]. The authors made a retrospective analysis of the number of RHD

associated deaths in 2013 at the Indira Gandhi Institute of Cardiology, Patna, India. The article explains that, there were total 120 registered cases of RHD mortalities, which can be considered as an indication toward the lack of awareness regarding the symptoms, early diagnosis and treatment of Rheumatic heart disease (RHD).

Over the years, scientists have proposed many conventional as well as some highly unconventional methods of preventing cardiac diseases as well as other associated chronic disorders. The article published by Asaduzzaman et al. [4], proposed one such method for the prevention or more appropriate remedy for diabetes. The authors proposed that, the fat/oil component of chicken meat is a potent non-medicinal component for the treatment of hyperglycemia and insulin resistance. The results of an experimental study encompassed the administration of chicken oil in rat models, which indicated that, it has positive implications on their glycemic and lipidemic status. It helped in lowering sugar and cholesterol level of the rats and also showed hepatoprotective activity. The present article is a proof of the remedial role of foods in the prevention and treatment of chronic diseases.

Treatment of some cardiovascular diseases necessitates invasive intervention and/or placement of prosthetic components. Study of the average survival rate of patients, who underwent these surgeries, is an important factor in establishing its clinical efficacy and recommending it in real time conditions. The article published by Rizzoli et al. [5] serves the same purpose. The authors made an extensive retrospective analysis to access the performance of prostheses after mitral replacement surgeries in 230 patients. The study made a comparison between the survival rates by using Biocor Standard prosthesis in Padova and Verona vs. US. The calculations made in terms of patient years achieved indicated that, while the prosthetic instrument enhances the survival rates by 30% in Americans the rate of survival in Verona and Padova is only 6%. The present study indicates that, the final clinical outcome of cardiac patients depends on multiple ranges of factors including surgical strategy and lifestyle alterations.

Terminally ill cardiac patients are often recommended transplantation as the only measure that can save them. The major problem in heart transplantation, apart from the medical issues of compatibility and immune complications, is the availability of a suitable donor. Due to the acute global shortage of donor organs, scientists have been working on the development and implementation of artificial bionic organs. The article published by Szabó et al. [6], described the working principle and advantages of one such artificial organ, namely Scandinavian Real Heart 8 (SRH8). The article elucidated the analogous similarities between human heart and the artificial heart and explained the role of the electric motor pump. Considering the fact that such artificial pulsatile hearts may hold the

key to the treatment of cardiac dysfunctions in the future, the information presented in the article is highly valuable.

The issue also published few review articles and case reports that were based on multiple cardiological complications. The review article published by Srikanthan et al. [7], presented a systematic review of the chemotoxic effects of anthracycline-trastuzumab chemotherapeutic formulations that are administered for the treatment of breast cancer. Chemotherapy related cardiac dysfunction (CRCDD) not only leads to the quality of life of the patients, in most cases it also necessitates discontinuation of chemotherapy. The article emphasized on the importance of early detection of CRCDD so that, it can be treated and managed but, not at the expense of progression of breast tumor. The authors did a splendid job in reviewing all the prevalent serum biomarkers that may help in diagnosing CRCDD. The authors also proposed that, topoisomerase 2 β , serum troponin T/I, myeloperoxidase, NT-proBNP, miR-208b, miR-34a, and miR-150 may be used as clinical biomarkers for the development of cost effective methods of detection of CRCDD.

The clinical role of serum troponin was also explored by a case report that was published in the issue. The article published by Piccioni et al. [8], reported a case of Hypertrophic cardiomyopathy in a 77-years-old woman. The authors described the process of diagnosis of the condition with the help of ultrasonography and serum troponin expression levels. The article also explains the hypertensive complications and diastolic dysfunction that occurred in the patient due to left ventricular hypertrophy. Furthermore, the article provides information regarding the applicability of ACE inhibitors, loop diuretics, beta blockers and disopyramide in augmenting the anti-

hypertension therapy in such patients. The information present in the article can act as a reference for the treatment of similar cases in the future.

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