

Editorial preface to the fourth issue of 2011

We are more than pleased to present you with the fourth issue of the *Journal of Cardiovascular Disease Research*. This issue covers 1 review article, 6 original research articles and 3 clinical case report-based studies. The review article discusses the distinctive patterns of abdominal obesity with an increased cardiovascular disease risk in South Asians.

Obesity is a major contributor to the prevalence of cardiovascular diseases in the developed world, suggesting that there is a strong relationship between obesity and cardiovascular diseases. Increasing evidence suggests that obesity-associated cardiovascular disorders variations across regions and ethnicities. In the review, Prasad *et al.* describe the distinct patterns in obesity (mainly, abdominal obesity) contributing to an increased cardiovascular disease risk in South Asians. PubMed, one of the most comprehensive biomedical databases, Embase and Cochrane Library were searched for the literature review using the specific search terms such as “South Asians”; “Asian Indians”; “obesity”; “overweight”; “cardiovascular risk factors”; “childhood obesity”; cardiovascular disorders - “CVD”; Chronic heart disease - “CHD”; “physical inactivity”; “metabolic syndrome”; “ethnicity” etc. The distinctive features of adult obesity in South Asians and the underlying mechanistic pathways that contribute to such distinct patterns among this population are also discussed. The authors in this study have found that South Asians have a distinct obesity pattern in the form of increased fat mass and low lean mass, as compared to Whites, for the same level of body mass index (BMI). In addition, this review also discusses the need for new and revised cut-off points of BMI for specific ethnicities, the burden of obesity in specific population sub-groups, and main differences underlying abdominal obesity.

In the first original article presented in these issues, Chatterjee *et al.* evaluate the role of connexin 43 (Cx43) in congenital heart diseases. Cx43 is largely expressed in

the ventricular myocardium and cardiac neural crest cells. While Cx43 is believed to play an important role in human congenital heart disease, the role of GJA1 mutations in human remains unknown. Chatterjee *et al.* analyze the sequencing for GJA1 mutations in 3000 patients with congenital heart disease, including 224 patients with outflow tract anomalies. The sequencing analysis reveals only two silent nucleotide substitutions in 8 patients without any amino acid altering mutations in GJA1 gene. This result suggests that GJA1 mutation is not likely a major contributor to congenital heart disease, which is further confirmed by two knock-in mouse models with point mutations at serine residues subject to protein kinase C or casein kinase phosphorylation.

The second original article describes the association between diastolic dysfunction and type 2 diabetes mellitus in the Indian patients. While there is a high prevalence of pre-clinical diastolic dysfunction among subjects with diabetes mellitus, the pathogenesis of this dysfunction in diabetic subjects is not clearly understood. Patil *et al.* observed that asymptomatic diastolic dysfunction is more prevalent (54.33%) in subjects with type 2- diabetes mellitus, which in turn is correlated with the duration of diabetes, Glycated hemoglobin (HbA1c) levels, obesity indices and diabetic microangiopathies. This result suggests that early diagnosis and institution of treatment for diastolic dysfunction would reduce the morbidity and improve the outcome of diastolic heart failure.

The third original article evaluates the effect of long term practice of fast pranayama (Mukh Bhastrika) on autonomic balance in individuals with stable cardiac function. Fifty healthy male individuals within the age range of 18-25 years are studied. Shashikala *et al.* observe that the long term practice of Mukh Bhastrika has beneficial effects on cardiac autonomic reactivity. The authors also suggest that future studies will use larger sample size including female population, training for longer duration, and more advanced imaging technologies for a better understanding of the underlying mechanisms.

In the first case study report in this issue, a 36 year old Human immunodeficiency virus (HIV) infected patient who is not taking highly active antiretroviral therapy presents with accelerated atherosclerosis in aorta, coronary

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and carotid arteries. In this report, the authors describe the results of microscopy and histopathological examinations. The authors also further discuss the risk factors including male sex and smoking in the causation of atherosclerosis, and suggest the strategies to decrease the cardiovascular risk in HIV infected patients.

In the second case report, Senthilkumaran *et al.* describe a 22 year-old male gardener with acute myocardial infarction following a centipede bite. The centipede venom is a lipid-toxin complex that is known to facilitate mainly local cellular penetration and absorption. Thus, acute myocardial infarction reported in this case is a rare situation following by centipede envenomation. The authors also discuss the probable mechanisms and suggest that awareness should be made for those involved in field work.

We hope that the papers in this issue will prove helpful toward the most recent developments in cardiovascular research. Last but not the least, I would like to take this opportunity to thank the authors for their valuable contributions to this issue and the editorial staff for their dedication and hard work, that would make *Journal of Cardiovascular Disease Research* one of the most

authoritative journals in the field of cardiovascular research.

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