

Editorial preface to the first issue of 2012

In the spring of 2012, The *Journal of Cardiovascular Disease Research* (JCDR) would be two years old, and we are pleased to introduce the first issue of 2012 in celebration. It is due to the dedicated efforts by our editors and reviewers that our journal is attracting high quality research papers from the authority in the field, and is becoming more and more popular amongst our cardiovascular profession colleagues and doctors. It gives us immense pleasure to see the journal grow by leaps and bounds, and become stronger with each passing day.

This new issue of JCDR highlights multidisciplinary contents, which include five original research articles, four clinical case report based studies and two cardiothoracic surgery reports. Among them, Dr. Hadi's article about the anti-atherosclerotic activities of two anti-diabetic drugs has been commented by Dr. Kan Chen from Brigham and Women's Hospital, Boston.

It is a known fact that Type II diabetes can increase the chances of atherosclerosis in those affected. Glimepiride and Repaglinide are two commonly used oral anti-diabetic drugs, and they act by promoting insulin secretion. In this issue, Hadi *et al.* demonstrated in rabbit models that these two drugs also have anti-atherosclerotic effects through the inhibition of the inflammation and reduction in oxidative stress. These findings raise the possibility of applying these two drugs to atherosclerotic patients, especially in those with type II diabetes. This investigation was further commented by Dr. Kan Chen from Brigham and Women's Hospital, Boston.

Monosodium glutamate (MSG) as a food flavoring agent has been widely used in Asia since over a 100 years now. Singh K and Ahluwalia P studied the short term effect of MSG to mouse hearts. They found that MSG markedly decreased the enzymatic activities of superoxide dismutase, catalase and GSH metabolic enzymes. Therefore, MSG

increased the oxidative stress in hearts and predisposed MCG-fed mice to heart disease. According to this finding, it is better to avoid MSG in our diet.

Cardiac syndrome X is a cardiogenic angina without obstructive coronary artery disease. The pathogenesis of cardiac syndrome X is still unknown. In this issue, Rasmi *et al.* suggested that the high rate of prevalence of *Helicobacter pylori* infection in Iranian patients with cardiac syndrome X, could point to the former as being one of the causative factors. It has been suggested that the interaction of non-invasive *Helicobacter pylori* with vascular endothelial cells causes chronic inflammation and microvascular dysfunction in the coronary arteries.

Plasma brain natriuretic peptide (BNP) level can be regarded as a biomarker for myocardial stress. Heart diseases such as cardiomyopathy, coronary artery disease and valvular heart disease can affect the circulating BNP level. Bordbar *et al.* showed that endurance exercise offers great advantage to our cardiovascular system and helps in lowering the circulating BNP level. This is achieved by reducing heart stress and increasing the cardiac contractile function.

Obesity and overweight are severe social issues, not only in developed countries, but also in developing countries, such as China and India. As per the findings by the World Health Organization, the prevalence of obesity and overweight has more than doubled since 1980. Obesity and overweight are major contributors to chronic diseases, including cardiovascular disease, type II diabetes, and even certain cancers. In this issue, Hassanzadeh *et al.* finished an epidemic study between obesity and overweight and non-communicable diseases at the Markazi province of Iran, a developing country. Coronary artery disease accounts for about 40% of premature deaths, and obesity and overweight, which are both preventable, are the major risk factors to developing such coronary artery disease conditions.

In clinical practice, cardiovascular diseases are often found to have diverse manifestations which can complicate the diagnosis. In this issue, we have presented four rare, however interesting cases, three of them are strongly associated with cardiac sudden death. Hypertrophic cardiomyopathy is featured by increased left ventricular wall thickness and is a major risk factor for sudden death, especially at a young

Access this article online	
Quick Response Code:	Website: www.jcdronline.com
	DOI: 10.4103/0975-3583.91589

age. Femenia *et al.* presented a rare case of a teenage girl with idiopathic hypertrophic cardiomyopathy and rapidly progressive fragmented QRS. The girl was diagnosed with hypertrophy at the age of nine and thereafter received β -blocker treatment for 7 years before she was developed massive hypertrophy and fragmented QRS, which caused a cardiac arrest. She recovered well after implantable cardioverter defibrillator implantation and continuous β -blocker therapy. The researchers suggested that the fragmented QRS might act as a non-invasive marker test for ventricular arrhythmia in patients with hypertrophic cardiomyopathy.

Cardiac developmental mild defects are rare and hard to diagnose without using high-tech contemporary equipments. Satija *et al.* reported another uncommon cause of sudden cardiac death. Malignant abnormal right coronary artery, which is a rare developmental defect, can prove lethal; and, can be detected using multidetector row computed tomography with essential knowledge. In another case, Jain *et al.* reported an unusual case where a rupture of both, the sinus of Valsalva and subaortic membrane, was observed. Subaortic membrane affects the aortic valve and the hemodynamics of the left ventricular outflow, which can lead to hypertrophy or myocardium ischemia, and finally cause heart failure. The association between subaortic membrane and rupture of the sinus of Valsalva is still a myth. The possibilities of surgery are discussed by the clinicians.

In the last case report, Kota *et al.* shared an unusual case of pheochromocytoma with renal artery stenosis. They performed literature review, and discussed the potential association between pheochromocytoma and renal artery stenosis, and mentioned that the hypertension caused by catecholamines secreted by the tumor cells, and compression of renal artery could be the two possible causes.

When the conservative medical management approach fails to produce results, we may have to use the surgical route for a number of heart related conditions. In this issue, we present a retrospective study for a new stentless aortic valve replacement technique and one coronary artery bypass grafting for a patient with gout arthritis. Conventional stentless aortic valve prosthesis shows great

hemodynamic benefits. However, its association with increased postoperative heart block suggests that newer techniques or modifications are urgently required. To solve this problem, Song *et al.* have presented an alternative subcoronary implantation technique. Their comparative retrospective study of two groups receiving different stentless aortic valve replacement surgery procedures showed that the new method remedies for the shortcomings of the conventional method. When compared with the 80 patients operated by conventional subcoronary implantation technique, 50 patients who received treatment by the new alternative subcoronary technique had greatly reduced incidence of postoperative complete heart block. In another surgery report, Ugurlucan *et al.* presented the case where a surgery was successfully performed in a 63-year-old patient with coronary artery disease in company with metabolic gout arthritis. Elevated serum uric acid levels are known to be associated with coronary artery disease and can cause gout arthritis. In patients with atherosclerosis causing severely occluded coronary arteries, coronary artery bypass grafting may be required.

At the end of this preface, I would like to take the opportunity to extend my sincere acknowledgement to all the authors and readers of our journal, the *Journal of Cardiovascular Disease Research*, for extending their kind support and co-operation which truly helped the journal to grow and become as successful as it is today.

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How to cite this article: Cheng H. Editorial preface to the first issue of 2012. *J Cardiovasc Dis Res* 2012;3:1-2.