

Special Issue on
Type 2 Diabetes Mellitus and Macrovascular Complications

CALL FOR PAPERS

The number of people with type 2 diabetes mellitus (T2DM) has been increasing worldwide due to aging, urbanization, and dietary and lifestyle changes. Chronic hyperglycemia in patients with T2DM causes serious complications. Macrovascular complications, mainly including cardiovascular and cerebrovascular diseases, are the most common complications and the major cause of mortality and morbidity in patients with T2DM.

In recent years, there are several advances in this field. Diabetes patients usually have hyperglycemia, hyperlipidemia, and insulin resistance; all of them are risk factors for macrovascular diseases. PKCs, RAGE, and ROS may mediate the effects of hyperglycemia and hyperlipidemia on cardiovascular systems. Knockout of PKC β , RAGE, and Nox1 could attenuate the development of atherosclerosis in diabetic mice. To mimic endothelial or macrophage insulin resistance, insulin receptor was specifically knocked out in endothelial cells or macrophages. The development of atherosclerosis was accelerated in endothelial insulin receptor knockout mice and the plaque was more unstable in macrophages insulin receptor knockout mice. Look AHEAD trial and the Italian Diabetes and Exercise Study indicate that lifestyle management significantly improves physical fitness, A1c, and coronary heart disease (CHD) risk factors. Weight loss surgery, especially bariatric surgery, could result in weight loss, A1c improvement, and CVD risk factor improvement. Furthermore, data are available about the effect of glucose-lowering therapies on cardiovascular risk in patients with T2DM. In addition, clinic trials have demonstrated that with comprehensive management of CVD risk factors such as lowering blood glucose, smoking rate, and total cholesterol as well as blood pressure mortality rates from macrovascular complications have been declining steadily in some countries.

We invite investigators to submit original research articles and review articles aimed at exploring the prevalence of macrovascular complications in T2DM, the relationship of CVD risks and macrovascular outcome, the molecular pathways regulating macrovascular pathology, findings in human and animal that can reduce macrovascular complications, and new information in clinic trial.

Potential topics include but are not limited to the following:

- ▶ Impact of genetic background on macrovascular complications
- ▶ Molecular pathways and macrovascular pathology
- ▶ Chronic inflammation and endothelial dysfunction
- ▶ Epidemiology of macrovascular complications
- ▶ Risks for macrovascular complications
- ▶ Obesity and macrovascular diseases
- ▶ Contribution of exercise in macrovascular complications
- ▶ Diet and macrovascular complications
- ▶ Weight loss surgery and macrovascular complications
- ▶ DPP-4 inhibitor and incretin on macrovascular events
- ▶ Hypoglycemia, fluctuation of blood glucose, and cardiovascular and cerebrovascular diseases
- ▶ Specific glucose-control strategies on macrovascular outcomes
- ▶ Predictive equation for macrovascular complication

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/ije/tdmc/>.

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Manuscript Due

Friday, 24 February 2017

First Round of Reviews

Friday, 19 May 2017

Publication Date

Friday, 14 July 2017