Cardiology Research and Practice

Special Issue on

Vascular Inflammation and Remodelling in Cardiovascular Disease

CALL FOR PAPERS

Occlusive vascular diseases such as atherosclerosis and peripheral arterial disease are leading cause of mortality and morbidity. Importantly, the growing prevalence of obesity and type 2 diabetes mellitus is expected to increase the number of affected patients significantly over the next 10 years. Procedures such as coronary artery bypass grafting (CABG) and percutaneous coronary intervention (with or without stent insertion) are standard treatments for patients presenting with acute coronary syndromes as well as patients with chronic coronary heart disease for whom pharmacological therapy is ineffective. However, the success of both procedures is limited. Despite improvements in polymer technology and the introduction of drug-eluting stents, stent deployment disrupts atherosclerotic plaque architecture and triggers a localised inflammatory response which triggers vascular endothelial cell inflammation and drives the vascular smooth muscle cell migration and proliferation responsible for neointimal hyperplasia, in-stent restenosis, and an increased risk of thrombosis. The ensuing renarrowing of the vessel means that associated symptoms can reoccur, which necessitates additional treatment and exposure to the associated risks. With regard to CABG, approximately 40% of saphenous vein conduit vessels fail within 10 years due to vessel remodeling and accelerated atherosclerosis. Therefore, there is an urgent need to better diagnose patients at an early stage of occlusive disease, identify patients who would benefit most from specific therapeutic interventions, and identify new therapeutic strategies to better maintain vessel patency and thus improve patient outcomes.

This special issue will appraise the readership of developments in the field of vascular inflammation and remodeling, from emerging diagnostic tools to new therapeutic options, and would be of great interest to all cardiologists

We invite investigators to contribute original research articles as well as review articles that seek to address a variety of issues in the diagnosis and management of vascular inflammation and remodeling. Papers focusing on the application of stem cell technologies, imaging and biomarker studies, and image pattern recognition together with other novel therapeutic approaches or interventions that may contribute to improved personalised and effective treatments are especially welcome.

Potential topics include but are not limited to the following:

- Stem cells and vascular remodelling
- Micro- and macrovascular dysfunction in diabetes
- New molecular targets to inhibit restenosis following revascularisation
- Innovations in stent technology to limit restenosis
- Perivascular adipose tissue and vascular dysfunction
- Molecular imaging of vascular remodeling and inflammation
- The role of haemodynamics in vascular remodeling
- Biomarkers to inform personalized interventions for vascular remodeling
- Developments in personalised therapy for neointimal hyperplasia
- Novel biologics and antibody development for vascular inflammation

Authors can submit their manuscripts through the Manuscript Tracking System at https://mts.hindawi.com/submit/journals/crp/virm/.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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