

Screening, stem cells, biomarkers and hypercholesterolemia: our first original clinical research

Valentin Fuster and Hannah Camm

It's been a busy few months since we launched our call for original clinical research. What started as an encouraging trickle has become a steady flow of outstanding submissions. Without further ado, we're delighted to introduce our first original papers, now available online.

Rheumatic heart disease (RHD) is a huge problem, with low-income countries being the worst affected. The true prevalence of RHD is, however, uncertain; only screening can indicate true disease burden. In our first paper, Jonathan Carapetis and his research group document the highest echocardiographically confirmed prevalence of RHD reported to date—3.3% of children surveyed had definite RHD. In their cross-sectional screening study, they establish the efficacy of an echocardiography-based screening protocol using portable equipment. These are undeniably interesting findings, but what implications do they have in light of the lack of universally agreed criteria for the echocardiographic diagnosis of RHD? In the Clinical Context commentary accompanying this article, our Advisory Board member Philip Poole-Wilson interprets what impact these new results will have on screening in the context of recent literature.

With our second paper we move from disease screening to stem cells. In their translational study, Napoli *et al.* investigated the vascular 'niche'—the stable, complex, custom *in vivo* microenvironment in which hematopoietic stem cells reside and their developmental fate is governed—as a novel clinical target for the hematopoietic stem cell treatment of ischemic vascular diseases. They found that mice treated with parathyroid hormone, when administered in combination with granulocyte-colony stimulating factor, had increased blood flow, capillary density, nitrite/nitrate release, angiogenic factors, and circulating progenitor cells as well as reduced apoptosis, fibrosis, oxidative stress, and inflammation in ischemic muscles—strong evidence that the vascular niche is a suitable

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target for parathyroid-hormone-based stem cell therapy for peripheral ischemia. Further insights about the potential therapeutic implications of modulating the bone marrow niche as a strategy for treating peripheral ischemia will be provided in the accompanying Clinical Context commentary, available online soon.

In our next article, we present Romero-Corral *et al.*'s study of the relationships between leptin, C-reactive protein (CRP), obesity and cardiovascular disease in a large multi-ethnic general population. They show that high leptin levels are significantly associated with raised cardiovascular risk, providing additional value for risk assessment beyond that conferred by CRP, even after adjustment of cardiovascular risk factors and measures of total and central obesity. Interestingly, individuals with both raised leptin and CRP levels were at the highest cardiovascular risk. Could combining these biomarkers help detect individuals at raised risk for CVD? This possibility is explored further in the Clinical Context article, along with the complex relationship between leptin and CRP—watch out for the commentary online.

In our final article, to appear online soon, Samaha and colleagues tackle the unmet clinical need for additional LDL-cholesterol-lowering therapies. In their phase II multicenter prospective randomized trial, Samaha *et al.* investigate microsomal triglyceride-transfer protein inhibitor AEGR-733, in combination with ezetimibe, in patients with moderate hypercholesterolemia. Discussion of these findings in light of the ENHANCE trial and whether microsomal triglyceride-transfer protein inhibition is a viable additional approach for LDL cholesterol reduction will follow in the accompanying Clinical Context.

We've been truly impressed by the high standard of original work and excited by the wide range of interesting topics investigated—we want to thank our readers for their continued enthusiasm and welcome submission of future findings.

V Fuster is the Editor-in-Chief and H Camm is the Editor of Nature Clinical Practice Cardiovascular Medicine.

Competing interests

The authors declared no competing interests.

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