



Where is the resistance?

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Editorial

Decades of information from pathological studies have established that atherosclerosis underlies stable ischemic heart disease in the overwhelming majority of cases. However, this finding, reinforced by coronary angiographic data, has been assumed to mean a flow-limiting stenosis in a major coronary artery.

The link between symptoms and an obstructive stenosis is so ingrained that many physicians doubt that a patient may have symptoms and/or signs of ischemia in the absence of such a stenosis.

However, long-term follow-up studies have conclusively demonstrated that such patients may have increased adverse event rates, poor quality of life, and consume considerable health care resources compared with those without evidence of ischemia, underscoring the need for a better understanding of the pathophysiology of myocardial perfusion.

Issue 59 of *Heart and Metabolism* provides an incredible amount of information on the complex mechanisms regulating global and regional myocardial blood flow, providing essential tools to understand better the fine tuning of myocardial perfusion.

The Basic Article summarizes the functional and structural changes occurring downstream of a tight coronary stenosis. The Main Clinical Article describes in a clear and effective fashion the fine regulation of the coupling between blood supply and metabolic demand.

The Metabolic Imaging article describes how cardiac magnetic resonance perfusion is rapidly emerging as a promising tool to assess myocardial ischemia.

The therapeutic implications of lowering coronary resistances are discussed in the New Therapeutic Approaches.

The multiple sites of interaction of trimetazidine with coronary blood flow regulation and myocardial perfusion through endothelial function restoration are reported in the Focus on Vastarel section.

How complex and sophisticated can be the functional assessment of a coronary stenosis is clearly demonstrated in the Case Report, while the Refresher Corner focuses on the interaction between myocardial contraction and perfusion.

The Hot Topics section reports on the unpredictable effects of stenosis removal on coronary blood flow reserve.

All together, *Heart and Metabolism* 59 offers a nice collection of papers on basic aspects of coronary pathophysiology with direct clinical implications. •