Abstract

Atherosclerosis and its prothrombotic complications are the cause of a significant number of deaths each year. Although the principal risk factors are known, they do not explain all the cases in which this disease is present, and there is considerable interest to introduce new markers. They could be used in prevention, diagnosis, prognosis, monitoring of treatment, and prediction of recurrence of the disease. The objectives of this work are to describe: a) the physiopathology of atherosclerosis and; b) the emerging plasmatic biomarkers. Plasma biomarkers of inflammation, activation of endothelial cell, oxidative stress, angiogenic growth, platelet activation, thrombosis have been identified, as well as apolipoproteins, lipoproteins and other molecules, some of them could be useful in the near future. However, aspects related with preanalytical, analytical and post-analytical procedures must be known before using them. C-reactive protein and the apolipoprotein B are two likely incorporations for the clinical practice, although it is still necessary to get a consensus about their application. It will be necessary to optimize the use of biomarkers to avoid the increase in cost in the detection and assessment of the disease.

Keywords

Atherosclerosis, Physiopathology, Biomarkers, Coronary risk, Cardiovascular disease, Predictors.