APOLIPOPROTEINS: EMERGING BIOMARKERS FOR CAD

Dear Sir,

We read with interest the paper on the role of apolipoprotein A and B100 in patients with angiographically-proven coronary artery disease (CAD) by Khadem-Ansari et al.[1] It is an interesting piece of work that highlights the superiority of apolipoproteins over traditional lipid measurement for risk stratification.

We conducted a similar study in the North Indian population presenting with myocardial infarction and established that the apolipoprotein B/apolipoprotein A ratio in the identification of patients at risk is superior to the traditional low-density lipoprotein/high-density lipoprotein ratio.[2]

The identification of a robust biomarker for CAD is imperative for timely identification of risk factors in the Asian Indian population, which is more predisposed to CAD as compared to their western counterparts. This occurs in the absence of the traditional risk factors in this cohort.[3] According to the predictions of the World Health Organization, over the next ten years, India would lose US$237 billion due to heart disease, stroke and diabetes mellitus.[4] This is an alarming situation. The unique genetic makeup and environmental factors in this part of the world – 'nature and nurture' are the probable reasons behind this intriguing finding.[5]

A biomarker is thought to have clinical utility if it adds to clinical knowledge, provides risk information that is independent of established predictors, is easy to obtain and interpret in primary care settings, is accurate, reproducible and internationally standardised, and has a favorable cost benefit ratio.[6] Apolipoprotein A and B tend to follow these guidelines closely. The ratio of apo-B to apoA1 reflects the balance of cholesterol transport in an effective manner.

Our study also echoes the findings of the study by Khadem-Ansari et al, which validates the superiority of apolipoprotein assays in CAD risk stratification. Large population-based studies and randomised control trials to assess the efficacy of pharmacological interventions are needed to establish beyond a doubt the invincibility of the emerging biomarkers, apolipoproteins, in clinical practice. A critical appraisal of the existing knowledge and accumulated evidence is needed to assess the utility of the traditional lipid parameters in the evaluation of dyslipidaemia and atherosclerosis in clinical practice.

Yours sincerely,

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