

Editorial:

Serum lipids: A new look for an old subject.

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During the last four decades a large number of clinical reports focused on the role of dyslipidemia in the development of atherosclerosis and its consequences ⁽¹⁾. All protocols of such studies or reports recommended 12 -14 hour fasting blood specimens for the measurements of serum lipids ⁽²⁾. That was reported to be essential to stabilize these lipids especially the triglycerides (TG).

However recent reports have stressed on the effects of postprandial hypertriglyceridemia and hyperglycemia on the endothelial function and inflammation ⁽³⁾, and considered the postprandial surge of serum triglycerides a potent atherogenic factor and an important cause of cardiovascular disease. That was attributed to the increased levels of remnant lipoproteins in the blood in the postprandial state which promote arterial wall damage and cholesterol deposits (i.e. atherosclerosis) ⁽⁴⁾, and to lipolysis of triglyceride rich lipoprotein which release preformed mediators of oxidative stress (e.g., 9 or 13 -hydroxy ocatadecadienoic acid) that may influence endothelial cell function in vivo by stimulating intracellular reactive oxygen species production ⁽⁵⁾.

In Iraq , a recent report focused on a limited number of coronary artery disease cases and healthy control subjects , had pointed out the absence of a significant difference between the fasting and postprandial distribution of

serum lipids among the three groups of cases and controls : desirable , borderline and undesirable ⁽⁶⁾.

However as long as people are usually 16 – 18 hours / day , in the fed state , prediction of the disease risk in the postprandial state would be better than in the fasting state , with better assessment for the prognosis of atherosclerotic lesions which occur in the postprandial state . It may also improve the assessment of TG-lowering therapeutics.

Finally it could be said that even with the above mentioned remarks it may take a time to shift from the fasting to the non-fasting serum lipid tests, but , however the medical community now has a good reason to look carefully at the use of postprandial serum lipid tests since they would have the potential to identify people whose risk of heart disease is not reflected by traditional fasting tests ; and when this becomes valid focusing on the type of food will be of great importance in this respect specially when we are dealing with the highly processed, calorie-dense, nutrient-depleted diet favored in many cultures over the world and which would frequently lead to exaggerated supraphysiological postprandial spikes in blood glucose and lipids⁽⁷⁾.

References

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