

The influence lipid tolerance test on endothelial function and beneficial effect of PPAR- α agonist in subjects with non-diabetic metabolic syndrome

Adel Alhadhrami

College of Medicine-Darussalam International University, Yemen

The influence of dietary fat on postprandial metabolic biomarkers and endothelial function was not studied extensively in pre-diabetic metabolic syndrome subjects. We did a randomised single blind prospective interventional study on sixty subjects who were recruited from the endocrine outpatient and three primer family medicine clinics. These included asymptomatic or relatives of type 2 DM patients with metabolic syndrome who fulfilled the IDF criteria of metabolic syndrome with the exception of being diabetics. All subjects received counselling on lipid lowering diets from a dietician or health professional at baseline and subsequently at every visit. Subjects were counselled to maintain the diet prior to randomisation (at screening). Subjects were randomised into 2 groups [bi-block randomization of (2x2)]. Each subject participated in two oral lipid tolerance tests, one at baseline visit and another immediately at the end of 4 month period of study. Compliance to diet was assessed by questioning subjects every visit. We assessed the influence of high fat meal on the brachial artery diameter, glucose and triglycerides metabolism at baseline and at end of the study. In addition the possible beneficial effect of PPAR- α agonist in reducing the acute changes in these parameters during high fat meal was also analysed. In our study, brachial artery diameter decreased in both groups at baseline but this reduction in diameter was less in the PPAR- α agonist group after twelve weeks of therapy. Also the acute elevation in triglycerides post high fat meal was less in the PPAR- α agonist group at end of the study. This resulted in reduction in the duration of exposure of the endothelium to the atherogenic effect of the triglycerides in the PPAR- α agonist group post high fat meal.

dradel@ymail.com