Conclusions

Insulin resistance is much more than the initiating factor in diabetes. It is likely to be a major contributor to the cardiovascular changes seen in diabetes. It is linearly correlates very strongly with angiographic severity of CAD, especially in those with diabetes of more than 5 years duration. Insulin > 20 µIU/ml and HOMA IR > 3.4 are associated with severe CAD and it is likely to emerge as a simple, inexpensive marker to identify high risk diabetic patients who might benefit from aggressive management since HOMA-IR remains relatively stable from the onset of diabetes.

MDCASS 2 is a simple risk score which will help us to predict severe CAD before coronary angiogram. Further, HOMA-IR less than 2.5 appears to be associated with the favorable CAD profile. The presence of hyperinsulinemia, beyond a threshold of 20 µIU/ml despite an optimized therapy to reduce atherosclerotic risk factors represents an adverse outcome predictor at one year in type 2 diabetes mellitus with coronary artery disease.

Periodic measurement of fasting insulin levels may be useful for risk stratification of type 2 diabetic patients. HOMA-IR/hyperinsulinemia will emerge as an important tool for individualizing treatment in type 2 diabetes and might become an important risk marker and also therapeutic tool in the future.