Summary

Diabetes mellitus (DM) is a worldwide prevalent disease. The rapid rise of diabetes is a great concern throughout. This is also true for India. Diabetes is of several types. T2dm is most prevalent from of diabetes (90%). Increase prevalence of t2dm increase events of cardiovascular mortality. Life modification and drug therapy are the mode of management of t2dm. Insulin, insulin secretagogues and insulin sensitizers are the commonly used pharmacotherapeutic agents. Insulin resistance is the primary occurrence to develop IGT and t2dm. pioglitazone and metfomin are the widely insulin sensitizers. A study had been designed to assess the comparative efficacy and safety of metfomin and pioglitazone when used individually among IGT pts, along with glibenclamide in t2dm pts, and with insulin in severe hyperglycemic (HbA1c-10%) to find out the safe, efficacious, tolerable, low cost agent/agents for the treatment of t2dm pts particularly in the setting of poor country like India.

For that study 200 pts were selected but ultimately 164 pts completed the study. The study design was randomized open level prospective sequential interventional study. There were three study cohort. A cohort containing 89 t2dm nonobese pts (bmi-20.97±4.86kg/m²), 47.91±10.58yrs received GBCM, GBCM+MET, GBCM+PIO. Another cohort containing 40 t2dm pts got insulin, insulin+MET, insulin+PIO, age 48.65±12.13yrs, bwt-
54.775±9.924kg, last cohort was 35 IGT pts, age 48.42±14.60yrs, bmi-23±5.71kg/m².

Results of these intervention showed that fasting and post prandial blood reduced significantly from baseline by both monotherapy and combination therapy. But reduction was more observed with metformin when used individually (IGT pts) and co-administered with insulin/GBCM. This value was statistically significant. Safety profile study SGPT was raised with pioglitazone but was not significant and did not cause for withdrawal; lactic acid was rose with metformin but was tolerable and not significant. Metformin observed lipid friendly, where as pioglitazone dyslipidemic.

Diabetes is usually associated with dyslipidemia and responsible for increased cardiovascular events. Addition of metformin improve glycemic control at the sametime take care of lipid management. Again this drug is of low cost. Thereby does not affect the compliance and does effective glucose control and lipid care. Therefore it can be concluded that metformin, in mono as well as combination therapy, is safe, effective, tolerable and low cost drug. It also reduces the insulin requirement of the t2dm pts.