

Thesis Title Comparison of the Platelet Aggregation in
Diabetic Patients Following the Treatment
with Glibenclamide and Glipizide.

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ABSTRACT

Sulfonylureas, particularly the second generation are most widely used oral hypoglycemic drugs. Apart from their efficacy in controlling blood sugar in NIDDM patients, they have been claimed that to prevent various diabetic complications. This beneficial effects are not correlated directly to the glycemic control but rather to the individual agent. A decrease of intravascular clotting, by increasing in fibrinolytic activity or by decreasing in platelets aggregation and/or adhesion have been reported following treatment with glibenclamide, glipizide or gliclazide. The present study designed to compare the effect of glibenclamide and glipizide, on glycemiccontrol and on platelets aggregation in NIDDM patients. Ninety two patients were recruited but only 37 patients can be followed and evaluated throughout 5-8

months. Patients age 58.9 ± 12.8 years (range 28-80) have been treated with glibenclamide or glipizide, were evaluated at 2-3 months interval. Their effectiveness in glycemic control are not significantly different. However, the dosage requirement of glipizide for acceptable glycemic control tend to increase at a greater extent than that of glibenclamide at the end of follow-up period. Both drugs appear to inhibit platelets aggregation induced by ($2\mu\text{g/ml}$) collagen and ($1\mu\text{M}$) epinephrine toward normal range but they have no effect on aggregation induced by ($1\mu\text{M}$) ADP. The present results suggest that glibenclamide and glipizide are equally effective in both glycemic control and alteration of platelets aggregation. Their effects on other parameters that contribute to intravascular clotting, such as blood lipids, clotting factors, fibrinolysis, as well as platelet adhesiveness remain to be established.