

## ABSTRACT

# EFFECT OF SODIUM DICLOFENAC ON THE BLOOD GLUCOSE PROFILE OF DIABETIC RATS

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Glibenclamide is frequently used in diabetic patients. In certain conditions, a diabetic patient usually gets a NSAID to reduce pain inflammation due to neuropathy and rheumatoid arthritis. However, there is a possible pharmacokinetic interaction between glibenclamide and sodium diclofenac. This interaction results in increasing the risk of hypoglycemia during the use of glibenclamide. This study aimed to assess the effect of sodium diclofenac on the blood glucose profile of a diabetic rat model.

Diabetic rats were divided into four groups, with five rats in each group. The first group received administration of glibenclamide 0.45 mg/KgBB, the second group received administration of glibenclamide 0.45 mg/KgBB and sodium diclofenac 4.5 mg/KgBB simultaneously, the third group received glibenclamide 0.45 mg/KgBB at 0 hours and sodium diclofenac 4.5 mg/KgBB at 0.5 hours, and the fourth group received administration of glibenclamide 0.45 mg/KgBB at 0 hours and sodium diclofenac 4.5 mg/KgBB at 1 hour. Blood glucose levels were measured at 0, 1, 2, 4, and 6 hours. However, blood glucose levels did not show any significant changes when administered with glibenclamide, glibenclamide and sodium diclofenac simultaneously, glibenclamide at 0 hours and sodium diclofenac at 0.5 hours, or glibenclamide at 0 hours and sodium diclofenac at 1 hour. The results showed that sodium diclofenac did not affect the reduction of blood glucose levels in a diabetic rat model.

**Key Words:** Glibenclamide, sodium diclofenac, diabetes mellitus, drug-drug interaction