

**Effects of *Momordica charantia* aqueous extract on renal histopathological changes associated with streptozotocin-induced diabetes mellitus type II in neonatal rats.**

ABSTRACT

This study investigated the effects of *Momordica charantia* (MC) extract on the renal functional and morphological changes in neonatal diabetic rats, a model of non-insulin-dependent diabetes mellitus. Diabetes mellitus was induced in 21 one day old Sprague-Dawley neonatal rats using a single intraperitoneal injection of STZ (85 mg/kg) and monitored for 12 weeks thereafter. The diabetic rats were randomly divided into three groups as follows: the diabetic control group, the MC treated diabetic group, and the glibenclamide treated diabetic group. The blood samples were collected to measure blood glucose, serum urea and creatinine. Urine creatinine, urine total protein and glomerular filtration rate was determined. Determination of malondialdehyde in plasma and kidney was also carried out. The kidney samples were taken for light and electron microscopic examinations. The level of serum creatinine and urea was significantly low in treated diabetic rats. Glomerular filtration rate was improved in the MC and glibenclamide treated rats. The renal tissue and plasma malondialdehyde were markedly lower in the MC treated diabetic rats. The degenerative changes in kidney tissue were alleviated in the treatment diabetic groups. These results suggested that MC fruit aqueous extract might have a significant role in alleviating kidney damage in the nSTZ-diabetic rats.

**Keyword:** *Momordica charantia*; Diabetes; Kidneys; Neonatal rats.