

Basic Health Sciences

Oral

Abstract ID: 32

## Antidiabetic activity of curry leaves *Murraya koenigii* on glucose level, kidney and islets of langerhans in streptozotocin induced diabetes in rats

Imad M. Al-Ani<sup>a</sup> | Rahajoe I. Santosa<sup>b</sup> | Muhammad H. Yankuzo<sup>a</sup><sup>a</sup>Department of Basic Medical Science, Kulliyah of Medicine, International Islamic University Malaysia<sup>b</sup>Department of Pathology and Laboratory Medicine, Kulliyah of Medicine, International Islamic University Malaysia

**Introduction:** This study examined the antihyperglycemic effect of curry leaves, *Murraya koenigii* “MK” aqueous extract, and to examine its possible protective effects on the Islets of Langerhans and kidneys in streptozotocin (STZ) induced diabetic rats. **Methods:** Thirty healthy adult male Sprague Dawley rats were randomized into five groups (n=6); normal control, normal treated with “MK” control, diabetic control (non-treated with “MK”), diabetic treated with 200mg/kg MK aqueous leaf extract and diabetic treated with 400mg/kg MK aqueous leaf extract. Blood glucose levels and body weight were monitored. The animals were sacrificed on the 30<sup>th</sup> day; the kidney and pancreatic tissues were processed for histological studies. **Results:** The diabetic control group significantly ( $p < 0.001$ ) showed considerable loss of body weight and increase in blood glucose levels and degeneration of the glomeruli and renal convoluted tubules and atrophied islets with disintegration of  $\beta$ -cells. Treatment of diabetic rats with aqueous extract showed significant ( $p < 0.001$ ) improvement in blood glucose levels and body weight gain. The MK extract also caused an improvement in tissue injury induced by STZ injection in the kidney and endocrine pancreas. **Conclusions:** These findings highlighted the beneficial effects of MK aqueous extract against cellular oxidative damage in STZ-induced diabetic rats.

**KEYWORDS:** Blood glucose, Body weight, Curry leaves, Islet of Langerhans, Kidney.