

604/E2

### **Oral hypoglycaemic activity of *Nyctanthes arbor-tristis* Linn in wistar rats**

T S Suresh\* and L P M P Hemachandra

*Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda*

The leaves of *Nyctanthes arbor-tristis* Linn. (Night jasmine, Sepalika and Pavalamallihai), has been used in Ayurvedic medicine in the treatment of diabetes mellitus. At present, powdered leaf is used in the preparation of 'Kashayas' administered to diabetic patients. The flowers are also used by diabetic patients as an infusion to be taken to reduce blood sugar levels. The present study was undertaken to study the oral hypoglycaemic activity of the leaves and flowers of the above plant prepared by traditional methods. The animal model used was the healthy, male Wistar rats subjected to glucose challenge.

Leaf and flower extracts of *N. arbor-tristis* Linn. Showed significant oral hypoglycaemic activity in rats subjected to glucose challenge. The extracts were administered to rats orally via Sondi needles and they were subjected to mild anaesthesia with diethylether before blood was drawn. Blood samples were taken from the lateral tail vein of rats two hours after the administration of extracts.

The leaf extract prepared according to the traditional 'reduction of eight volumes to one (*patha ata eketa sindaweema*)' method showed the highest hypoglycaemic effect and proved to be the maximally effective dose. This extract showed the highest reduction in the serum glucose level, two hours after the administration. Further the administration of the leaf extract for eight consecutive days significantly lowered the serum fasting glucose levels as well as the post-glucose challenge values.

The oral hypoglycaemic activity of the leaf extract was compared with metformin at a dose comparable with the human dose and the leaf extract proved to be more effective than metformin in reducing the serum glucose concentration after glucose challenge.

Financial assistance by the IRQUE/CBR grant is acknowledged.

\*malalavidhane@yahoo.com

Tel: 011 - 2803578