

EFFECT OF PLANTAIN FLOWER AND LEAVES OF *GYMNETMA SYLVESTRE* ON BLOOD GLUCOSE LEVEL

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Effect of temperal Plantain flower (*Valaipoo*) and temperal leaves of *Gymnema sylvestre* (*Sirukurunga*) on the blood glucose levels of 19 healthy volunteres were studied. The food ("varai") was prepared by the addition of scraped coconut, coconut oil, onions and chillies to a fixed weight of Plantain or *G. sylvestre*. The subjects were administred with 50g of fibrous food and 75g of glucose orally after over night fasting. Blood glucose levels were estimated before and 1 h administration. The same individuals were subjected to both the *Valaipoo varai* with glucose and *Sirukurunga varai* with glucose at 1 week interval. As a control glucose was administred alone to these subjects and the blood glucose levels were determined. The blood glucose levels at fasting and 1 h after the administration of glucose were 65.1 mg dl⁻¹ (+/- 10.1) and 96.1 mg dl⁻¹ (+/- 12.8) respectively. When *Valaipoo varai* and glucose and *Sirukurunga varai* and glucose were administred, the blood glucose levels at fasting and 1 h after the administration was 65.5 mg dl⁻¹ (+/- 8.5) and 75.0 mg dl⁻¹ (+/- 10.8) and 64.5 mg dl⁻¹ (+/- 9.3) and 82.71 mg dl⁻¹ (+/- 10.2) respectively. The result of paired "t" test for *Valaipoo varai* was 7.2 and for *Sirukurunga varai* was 4.3 and in both cases the "P" values were less than 0.01. These results indicate that Plantain and *G. sylvestre* which are fibre rich had a significant effect on the reduction of blood glucose level. This effect could have been brought about by the interefence of insoluble carbohydrate fibres on glucose absorption. The increase in blood glucose level in control subjects was 30 mg dl⁻¹ while after the administration of glucose and *Valaipoo varai* was 10.5 mg dl⁻¹ (+/- 11.6) and for *Sirukurunga varai* and glucose was 18.2 mg dl⁻¹ (+/- 6.0). The result of paired "t" test was 2.6 and "p" value was less than 0.05 (p < 0.05). Hence the result was statistically significant. The amount of fibre in *Valaipoo varai* was 3.01g/50g while in *Sirukurunga varai* was 1.22g/50g. In the food preparations sugar content was 1.22g/50g *Valaipoo varai* and 1.39g/50g *Sirukurunga varai*. The decrease in blood glucose level for Plantain and *G. sylvestre*, 3.01g and 1.22d fibre were 20.5 mg dl⁻¹ and 12.8 mg dl⁻¹ indicates that the amount of decrease in blood glucose is directly proportional to the fibre content of the diets.