ANTIPYRETIC EFFECT OF LATEX OF CALOTROPIS PROCERA

The latex of Calotropis procera, ethanol extract of its flowers and the chloroform soluble fraction of its roots have been shown to possess significant anti-inflammatory activity besides other medicinal properties. In addition we have also observed that latex is as potent as standard anti-inflammatory and analgesic drugs (our unpublished findings). The ethanolic extract of its aerial parts has been reported to possess antipyretic effect. As drugs possessing anti-inflammatory and analgesic properties may also exhibit antipyretic effect we have carried out this study to test the antipyretic effect of latex of C. procera in the rat model.

The latex was collected from the twigs of C. procera growing in the wild and was air-dried under shade. The dry latex (DL) was triturated with gum acacia in water (1:1), filtered and used.

Fever was induced in male albino rats weighting 150 gm as described earlier. Freeze-dried Baker’s yeast was administered as 20 % suspension in 0.9% saline (1gm/kg, s.c.) in the nape. Four hours after administration of yeast, either dose of DL (250 or 500 mg/kg), aspirin (200 mg/kg) or saline were administered orally in 1 ml volume. Body temperature (°F) was measured at 0, 3, 4 and 6 hours through rectal route using a digital thermometer. The basal temperature at 0 h was mean of three consecutive readings. The body temperature of drug treated animals was compared with that of saline treated control group. The values were expressed as mean ± SEM and statistical analysis was done by Student’s ‘t’ test.

Administration of yeast produced an increase in rectal temperature from 97.32 ± 0.19°F which reached to its maximum in 4 h (100.02 ± 0.27°F). There was no further rise in temperature at 6 h in the control group and the mean temperature remained at 99.74 ± 0.15°F. Administration of DL-250 mg/kg and 500 mg/kg at 4 h produced a significant (P <0.05) decline in rectal temperature to 98.50 ± 0.29°F and 98.45 ± 0.60°F respectively. The antipyretic effect was compared with that of aspirin, which was found to be more potent and brought down the temperature to 96.9 ± 0.38 °F (P <0.001). This study along with our earlier findings, on anti-inflammatory and analgesic effect of DL, suggests that DL has actions similar to aspirin.

SONEERA DEWAN, SURESH KUMAR,
VIJAY L. KUMAR
Department of Pharmacology, All India Institute of Medical Sciences, New Delhi - 110 029.
E-mail: kumari98@hotmail.com

REFERENCES