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## Possible curative effect of an Ayurvedic medicinal paste on cobra (*Naja Naja*) envenomised laboratory mice

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The venom of cobra (*Naja naja*), one the most dangerous species in the 0 Indian subcontinent, consists of different types of toxins. These toxins act on neurons, muscle and local tissues and the clinical picture of the patient varies according to the proportions injected and effects of toxins.

Ayurvedic treatment for cobra bite victims had been in use for generations while Anti Venom Serum (AVS) with other symptomatic treatments is administered in Western medical therapy. Objective of the present study was to investigate on the survival time of cobra envenomised mice with and without applying an ayurvedic medicinal paste. Twenty four mice were divided in to 3 groups of equal size (Groups 1, 2 and 3). All mice were pricked on their thighs with an 18G hypodermic needle to simulate a cobra bite and a total volume of 0.1ml of serially diluted fresh cobra venom doses were injected using an insulin syringe. The doses (protein concentration) of injected venom were 25 mcg, 50 mcg and 100 mcg per mice, for groups 1, 2 and 3, respectively. Four mice from each of the 3 groups, were applied with the ayurvedic medical paste immediately afterwards. The medicinal paste was made using Yakawanassa (*Anisomeles indica*), Yakberiya (*Crotolaria laburnifolia*), Ekaveriya (*Rauvolfia serpentina*), Maduruthala - (*Ocimum sanctum*), Sassanda (*Aristolochia indica*), Kaha (Atkaha) - (*Curcuma longa*) and Karanda (Magul Karanda)- (*Pongamia glabra*). A control group of 4 mice were applied with the ayurvedic paste immediately after the simulated cobra bite in order to examine any effect of the paste only. The 4 mice treated with paste in Group 1 (25 mcg), lived relatively longer (391 Minutes), compared with the non treated mice (198 Minutes) in the same group. However, such indication on possible protective effects was not evident at higher concentrations of venom, in Groups 2 or 3. Therefore, it may be concluded that the ayurvedic medicinal paste under test has a beneficial effect only at the lowest concentration of venom used. At lower concentrations of the venom, the paste may have a local effect possibly by interfering with absorption of venom to the body and also reducing the local tissue reactions. The death of mice in groups 2 and 3 (higher concentrations of venom), despite the application of paste, could be due to acute action of venom on the nervous and muscular - skeletal system. Histo-pathological investigations on the effects of ayurvedic medicinal paste on tissues in mice, would confirm the present results. Further studies are recommended to investigate the possibility of using endogenous medicine concurrently with western medications, in order to improve positive response rate and prognosis, in cobra bite victims.

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