

An Evaluation on Factors Influencing Venom Yield in Spectacled Cobra (*Naja naja*) in Sri Lanka

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Snake venom contains medically important toxic proteins. Proteroglyphous snakes of the family Elapidae: *Naja naja* is the only recognized species of cobra in Sri Lanka and is responsible for a considerable number of envenomation and deaths due to snake bites. The dose of antivenin depends upon the amount of venom inflicted by the snake and the kinetics of venom distribution in the whole body. Although several studies have been conducted regarding this subject, the amount of venom ejecting per bite is still under investigation.

The current study investigated whether the body size, sex and other morphological characteristics of *N. naja* have any influence on venom yield when milked manually. For milking, small-sterilized beakers that are tightly covered with parafilm layers were used. The head of each milking snake was held and venom was extracted to the prepared beakers by applying a gentle pressure to the venom glands. After that, the volume of wet venom of each snake was measured using graduated pipets and these volumes were used for statistical analysis. *N. naja*

The average wet venom volume in 40 adult cobra (mean total length 1698 ± 161 mm; mean body weight 1466 ± 287 g) ranges from 200-1500 μ l (mean 485.15 ± 178.9 μ l) and 10 juvenile snakes (mean total length 632 ± 95 mm and body weight 420 ± 93 g) were 15-70 μ l.

The venom yield positive correlated with the length and body weight of the snakes. Even though males hold slightly high volume of venom than females, this volume difference is not significant. In summary, we found that the venom yield is more correlated to the body size and total length than the sex and other morphological characters of snakes. Further studies are necessary to find out whether venom yield differs due to geographic variations or other related ecological factors.

Key Words: Venom Yield, Spectacled Cobra (Naja naja)

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