



Research article

## Snake envenomation complications and outcome of their therapeutic management at general hospital Kaltungo, Gombe State, Nigeria

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**Key words:** Anti-snake venom, carpet viper, Envenomation, Snakebites, Kaltungo.

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### Abstract

**Background:** Snake bite envenomation leads to considerable degrees of morbidity and mortality. **Objectives:** The objectives were to assess snakebite types, their pattern of symptom presentations in the region, complications and the clinical treatment outcome. **Method:** The cross-sectional and prospective study using convenient sampling method assessed patients for types of snake inflicting the bite, time interval between bite and arrival at the hospital, duration of hospitalization, complications and outcome of drug and other management procedures. **Results:** The mean age and standard deviation of the patients was  $22.4 \pm 14.5$  years. The proportions of symptoms presented are: pain 128 (57.9%), bleeding 168 (76.0%), hypotension 30 (13.6%), blurred vision 89 (40.3%), paralysis 22 (10.0%) and shock 56 (25.3%). First aid treatments were herbs 75 (33.9%) and tourniquets 25 (11.3%). A total of 125 (56.6%) had 1-2 weeks hospital stay while in 14 (6.3%) patients it was >4 weeks. Major complications and other health related problems from carpet viper bites were GIT bleeding 20 (10.7), seizure 32 (17.1), and respiratory distress 11 (5.9%). The corresponding values for Puff adder were 5 (17.2%), 5 (17.5%) and 1 (3.4%) respectively. Multi-organ failure 9 (4.8%) occurred only with carpet viper victims. Death was recorded in 16 (7.2%) while 205 (92.8%) patients were discharged. Significant difference ( $X^2=31.97$   $P<0.001$ ) in death rate were recorded between early transfer (first 24 hours) to hospital and late arrival (after 24 hours). Risk of death was 10.7 times higher in early compared to late arrival to the hospital. Significant differences in symptoms were observed among snakebites with weakness ( $P=0.021$ ), redness around the wound ( $P=0.014$ ), blurred vision ( $P=0.008$ ), vomiting ( $P=0.009$ ), and Sweating ( $P=0.008$ ). **Conclusion:** Carpet viper constitutes the major snakebite in the region, and early hospital visit and the length of hospital stay are important to survival and/or complications. Pharmaceutical care is required in area of monitoring of anti-snake venom (ASV) and other adjunct therapies in the area as well as in patients' education.