ORAL PRESENTATIONS

[ID-O#037] Antivenom Availability, Treatment Practices of Snakebite Envenoming and Distribution of Medically Important Venomous Snakes: A Hospital-based Study in 40 Provinces of Vietnam

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Background: Snakebite envenoming is a neglected tropical disease endemic to Vietnam. The availability of appropriate antivenom and guideline-based management of snakebite victims are crucial for a favourable treatment outcome. This study evaluated hospital snakebite admissions, antivenom availability, and treatment practices of snakebite envenoming in Vietnam.

Methods: Data on snakebite admissions from 2018- 2022 were retrospectively collected from major provincial hospitals in 40 out of 63 provinces in Vietnam. A random subset of snakebite patients' files was reviewed for more detailed information. The availability and use of antivenom were assessed in all hospitals. Doctors and nurses were also recruited for knowledge and practice evaluation.

Results: Domestically produced monovalent antivenoms against Trimeresurus albolabris and Naja kaouthia were available in at least one major provincial hospital in 22 (55.0%) of 40 provinces. Inthe northern part of Vietnam, they were available in two (11.8%) of 17 provinces, compared to 20 (87.0%) of 23 provinces in the southern part. The mean number of annual snakebite admissions differed between hospitals with antivenom (133 admissions, range: 4 - 498, SD = 97) and without antivenom (32 admissions, range: 0 - 84, SD = 23). The distribution of responsible snakes showed distinct patterns in different geographical regions. Of 342 doctors and nurses who participated in the knowledge test, the proportion of participants who failed was significantly higher in hospitals without antivenom (p-value < 0.001). Treatment practices were not consistent across hospitals, with instances of misuse of antivenom, antibiotics, corticosteroids and other supportive therapies.

Conclusion: Availability of appropriate antivenom, number of snakebite patients, responsible snake species and knowledge of health care workers varied strongly, and significant deficits in managing snakebite envenoming were identified in 40 provinces of Vietnam. Training of health care personnel, an update of national management guidelines and additional types of antivenoms are needed to address these deficits.