OP-10

An interim analysis of prospective snakebite case data from the Myanmar Snakebite Project

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Objective: To document the type, severity, treatment and outcome for hospitalised snakebite patients in Myanmar. This information was used primarily to guide the Myanmar Ministry of Health response to management of snakebite as part of the Myanmar Snakebite Project (MSP), an Australian Government DFAT-funded foreign aid project.

Methods: Case data was collected by trained medical officers on snakebite patients presenting to selected hospitals as part of the MSP. Data was entered on hard copy forms and later transferred to a purpose-built FileMakerPro database, for analysis. Patient consent was received for all included cases. Where possible dead snakes brought in by patients were preserved and retained for expert identification.

Results: The period of data collection commenced in late 2015 and, for the purpose of this abstract, extends to July 2018. In this 2.5 year period 3880 cases were entered into the database, 3251 from the Mandalay region of which 2313 were from Mandalay General Hospital, and 629 from Yangon (fewer hospitals and a shorter collection period of 18 months). In the Mandalay region, of 2646 cases where a snake ID was provided, 78% were Russell's viper (RV), 12% were "green snake" (GS; mostly green pit viper, GPV), with only 2.8% cobra (Co), <1% krait. Most of the cobra bites where a dead snake could be identified were by Naja mandalayensis which caused predominantly local effects rather than neurotoxicity. The case fatality ratio in this region was 8.1%, almost all cases following RV bite, though with a single death from king cobra bite. Amongst GS bites, 20% had coagulopathy, 9 had evidence of acute kidney injury (AKI), 1 requiring dialysis. Amongst RV bites 62% had coagulopathy, 52% had AKI, 26% required dialysis and 11% died. More limited data from Yangon indicated a similar preponderance of RV bites (83%) and case fatality ratio (8.9%), but because cases were only collected from 2 hospitals which manage mainly more severe cases, this may be unrepresentative and artificially exclude most bites by other species.

Conclusion: Snakebite causes a significant hospital workload in Myanmar, particularly RV which is the major cause of AKI and snakebite fatality. Data collected by this project is assisting development of health system strategies to better manage snakebite in Myanmar. GPV bites are a significant problem numerically and can cause diagnostic confusion with RV bites, with implications for treatment and antivenom development.