[ID-P#077] Clinical outcomes in snakebite patients treated with polyvalent antivenom: A retrospective cohort study

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Background: Snakebite envenomation remains a significant public health challenge in Thailand, necessitating effective antivenom therapies. The Queen Saovabha Memorial Institute produces both monovalent antivenom (MAV) and polyvalent antivenom (PAV). While MAV is typically used for identified snake species, PAV is administered when the species is unknown. However, conclusive evidence comparing their efficacy and safety is lacking.

Methods: This retrospective cohort study, conducted at King Chulalongkorn Memorial Hospital, Bangkok, Thailand, from January 2017 to December 2022, aimed to compare clinical outcomes and adverse effects of PAV and MAV in all snakebite patients who presented to the hospital and required antivenoms. Data collected included antivenom type, patient responses, and observed side effects.

Results: The study included 54 patients: 24 (44.4%) received PAV and 30 (55.6%) received MAV. No statistically significant difference in clinical outcomes was observed between groups (p=0.76), with improvement observed in 16 patients (66.7%) in the PAV group compared to 23 patients (76.7%) in the MAV group. One patient in each group did not improve due to persistent abnormal coagulopathy. PAV was associated with fewer allergic reactions compared to MAV (1 vs 3 patients), although this difference was not statistically significant (p = 0.69). In the MAV group, one patient experienced an anaphylactic reaction and another developed coronary vasospasm myocarditis.

Conclusion: This study found no statistically significant differences in clinical outcomes or adverse effects between PAV and MAV. These findings contribute to the ongoing debate regarding optimal antivenom selection when snake species identification is uncertain. However, the limited sample size and single study site (Bangkok) warrant further research with larger cohorts to validate these results and potentially refine treatment protocols for snakebite envenomation in Thailand.