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Hematotoxic Manifestations and Management of Green Pit Viper Bites in Thailand

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BACKGROUND: Green pit vipers (GPV) are widely distributed throughout Thailand and are responsible for significant morbidities. The objective of this study was to demonstrate clinical presentations and treatment including; antivenom, antibiotics and surgical management of GPV bites.

METHODS: GPV bites reported to the Ramathibodi Poison Center between 1st Jul 2016 - 30th Jun 2018 were analyzed.

RESULTS: There were 285 GPV cases within the study period. Patients were predominantly male (62.8%) and the median age was 40 years (IQR 23-58). The median time from envenomation to hospital presentation was 4 hours. Patients were primarily bitten on the finger and foot (27% and 21% respectively). Most cases reported swelling (85%) with necrosis/gangrene and compartment syndrome occurring in 5 and 12 cases respectively. Systemic bleeding occurred in eleven cases (3.6%): gastrointestinal bleeding in 5 cases, gross hematuria in 2 cases, gum bleeding in 3 cases and hemoptysis (1 case).

The median onset of systemic bleeding was 3 hours post-bite. Earliest hemostatic abnormalities were detected by VCT (29.8%). Median onsets of abnormalities were detected by unclotted WBCT at 10.75 hours (IQR 3-22.5), VCT > 20 minutes at 12.5 hours (6-25), platelet < 50,000/mcL at 18.25 hours (8-39) and INR >1.2 at 19.8 hours (6.9-42.3).

915 vials of antivenom were administered in 172 cases (271 courses). Common indications for antivenom included prolonged VCT (48%), unclotted WBCT (21.4%), and platelets < 50,000/mcL (14.8%). Side effects were reported in 40 courses (14.8%), with anaphylaxis reported in 15 courses (5.5%). Antibiotics were administered in 179 cases (62.8%). Surgical management, including debridement and fasciotomy, were performed in six (2.1%) and two (0.7%) cases respectively.

CONCLUSION: GPV bites commonly