PREDOMINANT SYMPATHETIC ACTIVITIES AND HYPONATREMIA IN A CHILD WITH MALAYAN KRAIT ENVENOMATION

W Kriengsoontornkij[2,4], P Settabut1; T Jiranantakan[3;4];

[1] *Department of Pediatrics, Phaholpolpayuhasena Hospital, Thailand*

[2] *Department of Pediatrics, Faculty of Medicine Siriraj Hospital, Mahidol Universtiy, Thailand*

[3] *Department of Preventive and Social Medicine, Faculty of Medicine Siriraj Hospital, Mahidol University, Thailand*

[4] *Siriraj Poison Control Center, Siriraj Hospital, Thailand*

Introduction: Malayan krait is a neurotoxic snake commonly found in Southeast Asia. Causes of death include muscle paralysis and respiratory failure.Other serious complications that were reported sporadically in adult victims are hyponatremia and increased sympathetic activities. This is a report of a young child bitten by Malayan krait with coma, hyponatremia, persistent hypertension and tachycardia.

Case Report: A 6-year old girl was brought to a neighbourhood hospital because she got bitten by a snake at her left foot while she was sleeping on the floor in her house at 2 hours before arrival. The patient was initially conscious but she got intubated due to respiratory failure. The snake was caught and identified as Malayan Krait by medical toxicologists through a consultation to pediatric toxicologist at our poison center. She was referred to a provincial hospital for five vials of secific monovalent antivenom for Malayan krait that was administered intravenously at 8 hours after the bite. However she became unresponsive (Gasglow Coma Scale as E1V1M1) with absent brain stem reflex. Hypertension and tachycardia were noted as 135/66 mmHg and 160/min respectively on the first day. Hypertension was diagnosed as her blood pressure was over 120/80mmHg—90th percentile of normal blood pressure in children at same age. Intravenous hydralazine was given as a first choice of antihypertensive drug in children but there was no response. Oral propanolol was given following our recommendations. Her blood pressure was gradually decreased and controlled between 110/60 to 120/80 mmHg. She also had hyponatremia with serum sodium level of 129 mEq/L. Fluid intake was restricted to treat as the syndrome of inappropriate antidiuretic hormone secretion. Serum sodium returned to normal within a few days. She developed ventilator associated pneumonia successfully treated by standard antibiotics. Her muscle power was gradully improved and she was extubated on hospital day seven. The patient was subsequently discharged in good conditions with normal blood pressure on hospital day 21.

Discussion and Conclusion: Our patient exhibited prolong neurological deficits, increased sympathetic activities and hyponatremia despite specific antivenom therapy. Beta-adrenergic blocking agent such as propanolol is effective to control hypertension and tachycardia in patients with Malayan Krait bites based on our experience. Malayan krait envenomation has been reported in adults, however the incidence and clinical manifestations in pediatric patients have not been well elucidated. Our patient's clinical manifestation was close to adult patient, however better epidemiologic studies should be conducted to confirm this conclusion.