

standing. Admission CBC and chemistries were normal, but serum CK was 12,777 U/L. ALT and AST were 268 and 1,431 U/L, respectively. She was treated with IV fluids, bicarbonate, and oral *N*-acetylcysteine. The serum CK peaked at 76,364 U/L approximately 20 h after fish exposure. Her creatinine remained normal. Over the next 5 days, CK slowly resolved and she was discharged. At 6 weeks follow-up, she still complained of diffuse muscle weakness, but CK levels remain normal.

Discussion: This is a healthy female who developed severe Haff disease after ingesting buffalo fish. Haff disease, first reported in 1924, describes rhabdomyolysis following consumption of certain cooked, freshwater fish. It is felt to be caused by a yet unidentified toxin. There have been 23 cases reported in the USA, 12 of these related to consumption of buffalo fish. Our case is unique due to the immediate onset of symptoms and the extremely high serum CK levels. Our patient never developed renal manifestations of her severe rhabdomyolysis.

Conclusion: Haff disease may result in the rapid onset of severe rhabdomyolysis. Aggressive treatment with fluids and bicarbonate prevented renal damage in this case.

(80) An Observational Study of Snake Bites Presented to a Tertiary Care Centre in India

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Introduction: Venomous bites constitute an important cause of hospitalisation and mortality in developing nations. In the present study, we discuss the salient features of snake bite cases presented to our centre.

Subjects and Methods: The study was conducted prospectively in the Emergency Medicine Department of our hospital. All the patients presenting with snake bites from January to December 2008 were included in the study. Data extracted included demographic details like age, sex, marital status, residence, educational qualification, occupation and monthly income. The time of snake bite, time of hospital arrival, lag time in reaching the hospital and reasons for the same, and mode of transportation were noted down. The patients/attendants were asked about first aid received, the details of first aid, timing and by whom. The records of any outside treatment, setting and qualification of treating doctor were checked. The details of indoor treatment, door to needle time (defined as time from hospital arrival to administration of first treatment), requirement of antidote and the dose delivered were recorded. Finally, the duration of hospital stay and recovery status was noted. Data was presented as numbers, percentages, mean \pm SD and median (interquartile range (IQR)). Logistic regression and univariate analysis

were used to predict the effect of various confounding factors on the outcome and duration of hospital stay, respectively. *P* value $<$ 0.05 was considered statistically significant. **Results:** Sixty-four patients presented with snake bite were: neurotoxic (35), vasculotoxic (9) and non-venomous (20). Ninety percent of the victims were males. Mean age was 29 years. Identical representation of the study population from urban and rural areas was noted. More than half of the patients were illiterate and were labourers. Seventy-five percent were bitten during their sleep and the rest during the early hours or late in the night. Proximal joint tourniquet application at home was done in 39 % snake bite cases (25/64) and local incision was given in 20/64 patients. First aid was mostly administered by some close relative living with the patient. The median (IQR) lag time in hospital arrival in snake bite cases was 3.9 (2.2–7.3) h. Transportation time and referral from some other hospital were mainly responsible for delay in reaching the hospital. The mode of transportation was personal/private vehicles in majority. Around 70 % (45/64) of patients with snake bite groups had received outside treatment by graduate/postgraduate doctors in private/civil/government hospital settings. Outside treatment was mainly in the form of intravenous fluids and injectables. Only 10 % of snake bite patients (6/64) had received anti-snake venom in the periphery but in inappropriate dose. The median (IQR) door to needle time was 35 (30–52.5) min. Ten vials of anti-snake venom were given in (48/64) snake bite patients. Repeat dose was administered in only 30 patients having persistent neurological deficit or coagulopathy. Twenty of 35 patients with neuroparalysis required ventilation and 5 out of 9 with vasculotoxic bite required renal replacement. There was one mortality (1.6 %) due to cardiac arrest among all snake bite cases. None of the various confounding factors was found to significantly affect the outcome in snake bite cases. Out of the various determinants (for corrected model: $F=1.255$; $P=0.293$), only receipt of outside treatment showed a trend towards decreasing the duration of hospital stay although this also could not achieve statistical significance ($F=2.978$; $P=0.09$).

Conclusion: Snake bite is an important cause of emergency admissions at our centre, but with improvement in management, the mortality associated is greatly reduced.

(81) An Overview of the Types of Natural Toxins Poisoning Cases Reported to the National Poison Center for the Period of 2006 to 2009

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Objective: Poisoning involving natural toxin (NT) is one of the national health problems in Malaysia that is often

overlooked. The aim of the study is to describe the pattern of NT poisoning reported to the National Poison Center (NPC) in Malaysia over a 4-year period.

Methods: We reviewed and analyzed all calls registered by the NPC 24-h information and consultation service for the period between 1 January 2006 and 31 December 2009 focusing on the poisoning cases that involved NT. Age, gender, date of exposure, route of exposure, and type of NT poisoning were evaluated. SPSS version 15 was used for descriptive analysis of the data collected.

Results: During the study period, the NPC collected 292 telephone enquiries from the emergency departments in Malaysia regarding NT poisoning. Most calls were made by medical doctors (98.6 %) followed by other health professional (1.0 %) and public (0.3 %). NT poisoning occurred mostly in males (65.4 %). Snake bite accounted for 142 cases (48.63 %), followed by spider/scorpion/centipede poisoning in 41 cases (14.04 %), insects poisoning in 9 cases (3.08 %), jelly fish poisoning in 11 cases (3.77 %), other marine poisoning in 17 cases (5.82 %), plant poisoning in 17 cases (5.82 %), bacteria/fungi/algae poisoning in 48 cases (16.44 %), other NTs in 6 cases (2.05 %), and 1 case (0.34 %) of unknown NT poisoning. The number of poisoning calls from the emergency departments regarding NT poisoning was observed to have increased annually from 45 calls (15.42 %) in 2006 to 107 calls (36.64 %) in 2009 ($p < 0.001$).

Conclusion and Recommendations: There has been an increase in the number of calls received by the NPC involving NT poisoning. Based on the available data from the reported cases, animal toxins constitute 75 %, and other toxins comprise only 25 %. Further study is required to determine more accurately the degree of morbidity and mortality related to poisoning by NT.

(82) Comatose Children Poisoned by Persian Silk Tree Seed: a Case Report

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Introduction: Persian silk tree, a variety of *Albizia julibrissin* (mimosa), is native from Iran to central china. Julibrissin is a corruption of the Persian word gul-i abrisham which means “silk flower”. It is highly valuable in Chinese medicine as it has the most powerful properties for treating stress and anxiety depression. Symptoms of mimosa toxicity due to ingestion include stomach upset, ataxia, and lethargy in horses. All parts of this tree may cause severe discomfort if ingested. Ingestion of its seed is one of the strongest hallucinogenic herbal medicines.

Materials and Methods: This is a case report of three children (3.5, 3.5, and 4.5 years old) who ingested accidentally unknown amounts of Persian silk tree seed.

Results: All of them showed altered level of consciousness for about 5 to 8 h (DCS=7). Laboratory tests in our patients were in normal ranges and only QTC in ECG of one was more prolonged than normal (0.46 ms). One of children had obvious flushing in her checks that continued for about 6 h.

Conclusion: Although, Persian silk tree seed rarely can cause toxicity, but with regard to its widespread, it may cause poisoning, especially in children who ingested it accidentally. It can cause coma, hallucinations, convulsions, and tremor, but needs more clinical trial in animals for investigation of adverse effects.

(83) Comparative Study of Merrem’s Hump-Nosed Pit Viper (*Hypnale hypnale*) Bites Between Two Climatic Zones (Wet vs Dry Zone) in Sri Lanka

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Sri Lanka is a tropical island with great diversity in geography and climatic conditions that divides the country into three climatic zones: wet, intermediate and dry. Of the three species of *Hypnale* found in Sri Lanka, *Hypnale hypnale* is widely distributed and is responsible for most of the snake bites. The effects of different climatic conditions on the pattern of envenoming remain as an unanswered question. This study aims to investigate possible differences of *H. hypnale* bites between wet zone and dry zone using authentic systematically collected data from these regions. We collected 39 (wet zone) and 33 (dry zone) *H. hypnale* bites over a 1-year period from two major hospitals representing each zone. Offending snakes in all cases were identified and measured and their sexes were determined. In the wet zone, 28 (66 %) of *H. hypnale* bites occurred from August to October whilst in the dry zone, 20 (60 %) bites occurred from January to April corresponding to the monsoon rains. In both zones, majority of bites occurred in the surroundings of compounds; however, 6 (18 %) and 1 (3 %) bite occurred indoor in dry and wet zone, respectively. Occurrence of local necrosis is higher in dry zone bites, 12 (36 %), compared to 5 (13 %) in the wet zone. Six (18 %) had coagulopathy in dry zone bites compared to 1 (3 %) in wet zone. Development of neurotoxicity was documented in a patient from dry zone. We assume that the higher incidence of *H. hypnale* bites is related to the monsoon rains than to the climatic zones. However, differences in clinical manifestations such as severe local envenoming, coagulopathy and neurotoxicity were observed as they occurred more frequently in the dry