1 **This is a sample peer review report : a prospective observational study**

2 **This is a sample peer review report.**

3

4 **Abstract**

5   Snakebite related acute kidney injury (AKI) is a common community-acquired AKI in

6 tropical countries leading to death and disability particularly in young earning adults of families.

7 However, there were limited data on factors associated with snake related AKI in Southeast Asia.

8 Therefore, a prospective observational study was conducted in the three tertiary hospitals

9 between 2015 and 2016 among adults with snake envenomation with the aims to determine

10 renal manifestations and to evaluate factors associated with snakebite related AKI. Patient data

11 including baseline characteristics, clinical parameters, laboratory findings, hospital management

12 and outcomes were recorded in a case report form and compiled data for analysis. Of 258 adults

13 with snake envenomation, common renal manifestations included reduce urine volume (128/258

14 patients, 49.6%), renal tenderness (114/258 patients, 44.2%) and gross hematuria (46/258

15 patients, 17.8%). Abnormal urine findings included urine protein to creatinine ratio ≥1 (112/186

16 patients, 60.2%), microscopic hematuria (81/255 patients, 31.4%) and pigmenturia (38/255

17 patients, 14.7%). Electrolyte abnormalities included hyponatremia (115/258 patients, 44.6%),

18 hypocalcemia (88/256 patients, 34.4%), hyperphosphatemia (68/256 patients, 26.6%) and

19 hypokalemia (52/258 patients, 20.2%). AKI was observed in 140 (54.3%) patients and the

20 majority of the patients were AKI stage III (110 patients, 78.6%). Using multivariate logistic

21 regression analysis, the factors that independently associated with AKI included snakebites of

22 *Viperidae* family or had clinical syndrome of *Viperidae* (odds ratio [OR]: 12.93, 95% confidence

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Clinical and laboratory parameters associated with acute this is a sample peer review report: A prospective observational study

Commented [A2]: Dear Authors,
Thank you for the opportunity to assist you with your manuscript. After reviewing your work I have made some comments to further enhance your paper. Please review and revise, if you agree.
Regarding the main sections, kindly note as follows:
Introduction: I have suggested some modifications to enhance the clarity of your background and rationale.
Methods: This was generally well presented.
Results: Please indicate where all your results are to be found, or if they were not shown. Otherwise, it is difficult for the reader to follow your results.
Discussion: I have made a few suggestions to enhance clarity. Also ensure all citations are included.

Please also see further comments below.

The manuscript is overall well written, but too long. The general length of the manuscript for original research considered by majority of the journals are 2500-4500 words.
Hence significant reduction of words (minimum 4000 words) is necessary. In order to achieve this, authors may provide some of the data and clinical information (methodology section) in table format.
In addition, please avoid providing same data both in text and table. Providing data only in table, where relevant, will help to minimize the word count of the text.

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23 intervals [CI]: 3.37–49.61; p <0.001), presence of hypotension (OR: 3.59; 95% CI: 1.31–9.86; p

24 = 0.013), WBC >10 ×10^3 cells/µL (OR: 3.41, 95% CI: 1.43–8.15; p = 0.006), overt DIC (OR:

25 2.36, 95% CI: 1.15–4.83; p = 0.019), serum creatine kinase ≥800 IU/L (OR: 3.86, 95% CI: 1.62–

26 9.20; p = 0.002), presence of microscopic hematuria (OR: 3.31, 95% CI: 1.40–7.80; p = 0.006)

27 and duration from bite to needle ≥2 h (OR: 3.48, 95% CI: 1.52–7.94; p = 0.003). This findings

28 information might help clinicians identify snakebite patients who are at risk of AKI and to

29 provide proper clinical management. for patients who are at risks for snake-related AKI and

30 might reduce the incidence of community-acquired AKI in tropical countries.

31 **Key words:** Factors associated; Multivariate analysis; Snakebite related AKI; Prospective study

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Introduction

Currently, community-acquired acute kidney injury (AKI) is a major public health problem in tropical countries particularly in Asia [1,2]. Community-acquired AKI in tropical countries are related to young individuals with (mean age of 37-47 years) whose do not have pre-existing comorbidities [2]. These patients are at risk for the development of chronic kidney disease [3]. The community-acquired AKI in tropical countries is usually caused by any single etiology including tropical infections, environmental exposure to toxin or occupational hazard to snakebite envenomation [1,2]. It was reported that the highest burden of snakebite envenomation was observed in South Asia, Southeast Asia and sub-Saharan Africa [4]. In Southeast Asia, envenomation by two families of venomous snakes including *Elapidae* and *Viperidae* showed a significant morbidity and mortality with the case fatality rate of 0.4-20.0% [5,6]. Following snakebite envenomation by snakes of the family *Elapidae*, *Viperidae* and *Colubridae*, patients could develop renal manifestations including proteinuria, hematuria, pigmenturia and AKI [7,8]. Snakebite related AKI was reported ranging from 8.0-43.0% of patients with snakebite envenomation [9-15], of which renal replacement therapy (RRT) was required in approximately 15.0-55.0% [9-11, 13] and the case fatality rate occurred in 8.0-39.0% [9-11, 13,14]. Previous reports from Brazil showed the more susceptibility of snakebite related AKI with age increasing [16,17]. However, the factors associated with the ~~snakebite related AKI~~ sAKI included age <12 years, time from hospitalization to antivenom treatment >2 h, time from bite to needle >2 h, longer time from bite to hospital, cellulitis, regional lymphadenopathy, hypotension, higher total bilirubin level, lower hemoglobin level, intravascular hemolysis, prolong 20-minute whole blood clotting test (20WBCT), prolong bleeding time, prolong prothrombin time (PT), hemorrhagic

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54   manifestations, serum creatine kinase >2000 IU/L, dark or brown urine color, albuminuria and

55   longer length of hospitalization [9,10,12,13,15].

56   Recently, a report showed that there were approximately 10,000 cases of snakebite

57   occuring annuallyRussell's viper was the most common snakebite envenomation which accounted

58   in for 90% of for snakebite cases with the case fatality rate of 10.4% [18]. Previous report showed

59   that approximately 42% of patients with Russell's viper bites (10 out of 24 patients) developed

60   snakebite related AKI, all these cases recovered after antivenom treatment, but the other 21% of

61   the snakebite patients (5 out of 24 patients) developed snakebite related AKI following antivenom

62   treatment [19]. However, there were limited data on the renal manifestations and the factors

63   associated with the development of snakebite related AKI . Previous studies showed that the

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64   factors associated with the snakebite related AKI sAKIvaried among studies due to differences in

65   study population, the potency and composition of snake venom which is different in geographic

66   region of study sites, accessibility of management facilities and study design.

67   Therefore, a prospective observational study was conducted in the three tertiary hospitals

68   between 2015 and 2016 among patients with snakebite envenomation with the aims (1) to

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69   determine renal manifestations and (2) to determine the factors associated with the development

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70   of snakebite related AKI. This information might help clinicians in identifying patients who might

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71   develop renal involvement after snakebite envenomation and who are at risk for the occurrence of

72   snakebite related AKI in order to provide the proper management for decreasing the incidence of

73   community-acquired AKI in tropical countries.