



A Case Study of Acute Renal Failure in Snake Envenomation

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ABSTRACT

It's a case study on the clinical profile of snake bite patients with prospective evaluation of Acute Kidney Injury in 50 patients attending the casualty, Medicine departments, ASRAM General Hospital, during the period - Oct, 2014 to Oct, 2016.

KEYWORDS : Snake bite envenomation, Acute Kidney Injury

INCLUSION CRITERIA:

Features suggestive of snake bite with local and systemic envenomation

Progressive elevation (with in 48 hours) of serum creatinine >0.3 mg/dl from baseline, a percentage increase in the serum creatinine concentration of $>50\%$ or oliguria of less than 0.5 ml/kg/hr for more than 6 hours. (as per AKIN Criteria)

EXCLUSION CRITERIA:

Patients with past history of renal diseases.

Patients with predisposing illness of renal diseases (hypertension, diabetes, connective tissue diseases, chronic infection)

Patients with no features of envenomation

RESULTS

The studied patients have been analysed on time lapse presented to the hospital after snake bite and serum creatinine, urea, urine output were studied. Data compiled in following formats.

Lapse of time in hours	No: of Patients	Percentage %
0-2 hours	7	14
2-5 hours	18	36
5-12 hours	11	22
12-24 hour	7	14
>24 hours	7	14
Total 50	10	0

Serum Creatinine	Min - Max	Mean \pm SD	P value from baseline
Baseline	0.30-20.00	2.32 \pm 3.30	-
24 hours	0.90-21.00	3.02 \pm 3.58	$<0.001^{**}$
2nd day	0.60-21.00	2.94 \pm 3.72	0.016
3rd day	0.60-18.00	2.52 \pm 3.24	0.472

Urine output	Min - Max	Mean \pm SD	P value from baseline
Baseline	15.00-4000.00	1205.40 \pm 1010.72	-
24 hours	50.00-3500.00	1433.67 \pm 945.29	$<0.001^{**}$
2nd day	60.00-3000.00	1742.20 \pm 929.42	$<0.001^{**}$
3rd day	100.00-3500.00	1981.00 \pm 874.98	$<0.001^{**}$

DISCUSSION

In the present study, 50 cases were selected on the basis of simple

Random sampling method from the medical wards, department of General medicine ASRAM, Eluru, who had developed snake bite induced AKI. In present study lapse of time >24 hours 28%, which was not comparable to other study.

Comparison variables with significant p-value for the development of snake bite induced AKI with other study Athappan G and others

Variables	Athappan G and others	present study		
	percentage	p-value	percentage	p-value
Lapse of time >12 hrs	55%	0.0003	28%	0.005
Mean creatinine in mg/dl	4.24	0.01	3.02	<0.001

Clinical variables like lapse of time of >12 hours in presenting to the hospital, mean serum creatinine with significant p-value is comparable with Athappan G and others study.

CONCLUSION

In our study, the mean interval between snake bite and presentation to hospital was 15.37 hours. All snake bites were inflicted to lower limbs 60% of patients presented with decreased urine output which were associated with increase severity of AKI, and need for haemodialysis in 12% of patients. Only 26% of patients were not associated with the severity of AKI. Overall mortality due to snake bite induced AKI is 6%. Lapse of time in presenting to the hospital is the predictor of poor outcome in snake bite induced acute kidney injury

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