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TO STUDY COMPLICATIONS AND VARIOUS TREATMENT ASPECT AND OUTCOME OF SNAKE BITE

General Medicine

Dr. Rahul Gambhir Associate Professor, PDUMC, Rajkot.
Dr. Sachin Gajera Senior Resident, PDUMC, Rajkot.
Dr. Karan Faldu* Volunteer Intern, PDUMC, Rajkot. *Corresponding Author

ABSTRACT

Aims: To study clinical presentation and according to that early initiation of various treatment and prevention of complications. **Objectives:** To study the efficacy of various treatment modalities of snake bite. To study complication and it's outcome.

KEYWORDS

India has always been a land of exotic snakes. Snakes bite has become a very important preventable public health hazard as a result of urbanization and cutting down of forests. No definite statistics of snake bite and death due to snake bite are available or maintained as snakes bites usually takes place in villages and forests and their cases seldom reach hospitals for further treatment. However, it is believed that in India, about 2 million people are bitten by snake and about 35000-50000 case proves fatal. This amply reflects the magnitude of the problem. it is bit surprising that although snake bites a fairly heavy toll of human life in the country, scant attention has been paid to the management of snake bite until recently. Cautious working in the farm, field & forests by workers is the only preventable aspect that can be suggested in the areas infected with deadly snakes.1

Snakes are the ubiquitous species of reptiles and to the order of OPHIDIA It is believed that there are about 3500 species of the snakes in the word of which approximately 250 are the poisonous ones. Their bites whether poisonous or either are medical emergencies requiring immediate attention and exercise a considerable judgment. 2,3

Around 216 Varieties snakes are found in India, of which about 52 are venomous. Only four varieties of snakes are commonly encountered as a cause of snake bite poisoning. 2,3

- Russell's viper
- Saw scaled viper
- Krait
- Cobra

Snakes play a vital role in maintains the ecological equilibrium as they are the predators of rats, mice, lizard, insects and frogs.

Selection Criteria:

1) Only indoor patients with history of snake bite with age > 13yr
2) Patient must have a clinical evidence of toxic snakebite, like
A) Fang marks
B) Local cellulites
C) Local bleeding
D) Ptosis
E) Respiratory failure
F) Pain at site of bite

Exclusion Criteria:

1) Patient who did not give consent to participate in the study.
2) Patients those who have any other bite mark like dog, honey and any other animals.

METHOD:

- We performed a prospective/analytical study at PDUMC and Hospital, Rajkot from October 2020 to October 2021.
- All the patients are throughly interrogated in details and clinical examination carried out in details and available investigation and treatment modalities.
- All the patients are clinically observed regarding course and development of complication with any.

RESULTS:

Table 1 :- Correlation Of Use Of ASV In Snake Bite Patients

USE OF ASV	PRESENT STUDY
ASV GIVEN	100%
MULTIPLE DOSAGE	75%
SINGLE DOSAGE	25%

Table 2 :- Correlation With Mortality According To Duration Of Bite And Hospitalization

Duration Between Time Of Bite And Hospitalization	Present Study	Mortality
<12 hours	71%	2%
>12 hours	29%	3%

CONCLUSION:

1.The present clinical study was conducted in 100 patients of poisonous snakebite.
2.Date regarding history, symptoms, signs, investigations, treatment, complications and outcomes were recorded.
3.The maximum incidence was found in 21-40 year of age group.
4.The Male: Female ratio was 1.7: 1
5. Maximum number of patients were from rural area (78%).
6. Most of the case occurred during night time between 06:00 PM to 06:00 AM.
7.Rainy season between June to October has high incidence i.e.90 of 100 patients
8. 40% of patient did not have any fang mark at site of bite even though they had clinical feature. This indicates fang mark at bite site does not give adequate clue regarding identification of poisonous or non - poisonous snakebite.
9. Neurotoxicity was the commonest manifestation of snakebite i.e. 56% of patient. While haematotoxic manifestation occurs in 26% patient, while 13% patients had acute renal failure. Neurotoxicity can be found in bite by elapidae, hydrophidae, viperdae and crotalidae family of snake.
10. Among neurological manifestations Ptosis was the most common manifestation (57%cases) blurring of vision (29%) and difficulties in breathing (30%) were other manifestation of neurotoxic snake bite.
11. Prolong prothrombin time (80%), bleeding from bite site (80%) were the commonest manifestation of hematotoxic snake bite this is because of various enzyme like demo toxin, pro coagulant, hemorrhaging which produce bleeding tendency and D.I.C. like picture.
12. Local pain (73%), local swelling (29%) and local site bleeding (25%) were the commonest local manifestation of poisonous snake bite this is due to cytolytic or necrotic toxin and digestive hydrolase (proteolytic enzyme, phospholipaseA) polypeptide toxin which increase permeability of capillary wall resulting in local manifestation.
13. Polyvalent anti snake venom to 100 % of cases. (75% multiple doses +25% single dose). Polyvalent ASV is the cornerstone in the management in the toxic snake bites which minimizes the complications and mortality
14. Majority of patient (90%) were cured in these present study indicate that early diagnosis and prompt treatment of poisonous snake bite in hospital were facilities of Anti snake venom, mechanical ventilation, blood transfusion and hemodialysis were available.
15. Respiratory failure (30%) is most common cause of death.
16. In present study there were 61 patients with neurotoxicity among whom 10 patients were kept on mechanical ventilations, out of which 7

patients were cured and 3 patients were expired. It indicates mechanical ventilator has significant role in reduce mortality of neurotoxic snake bite.

17. In present study there where 71 patient come within 12 hours of bite out off them only 2 patient was expired,29 patient come after 12 hours of bite out off them 8 patient was expired.In this we apply yate's chi square test that is 8.431 and p value is 0.0036. it is statistically significant.(p value is less than 0.05).

18. Early hospital admission after the toxic snake bite, round the clock availability of polyvalent ASV at CHC and PHC level, good artificial respiratory devices, under expert supervision to counteract any complication if arises, during treatment of toxic snake bite will reduce mortality to a larger extent.

19. Public awareness in the form of

A) Health education to farmers and laborers.

B) Implication of preventive protective measures.

C) Control of unnecessary deforestation

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