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RESEARCH ARTICLE

CLINICAL PROFILES AND OUTCOMES IN PATIENTS WITH SNAKE BITE

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ABSTRACT

India has always been a land of exotic snakes. Snake bites become a very important preventable public health hazards as a result of urbanization and cutting down of forests. However, it is believed that in India about 2 million people are bitten by snake and about 35000-50000 cases prove fatal. This amply reflects the magnitude of the problem. It is mainly due to unawareness about the snake and snake bite management. As a result of this there is delay in correct treatment and failure to perform necessary interventions.

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INTRODUCTION

India, a land of exotic snakes, Snake bites become a very important preventable public health hazards. No definite statistics of snake bite and death due to snake bite are available or maintained as snake bites usually takes place in villages and forests and their cases seldom reaches to the hospital for further treatment. It is bit surprising that although snake bites takes a fairly heavy toll of human life in the country. Attention has been paid in the management of snake bite until recently; cautions working in the farm, field, and forests by workers is the only preventable aspect that can be suggested in the area infected with deadly snakes. Snakes are ubiquitous species of reptiles and to the order of OPHIDIA. It is believed that there are about 3500 species of snakes in the world of which 250 are the poisonous ones. Their bites whether poisonous or otherwise medical emergencies requiring immediate attention and exercise a considerable judgement. Around 216 varieties of snakes are found in India of which 52 are venomous.

Only four varieties of snakes are commonly encountered as a cause of snake bite poisoning.

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1. Russell's viper
2. Saw scaled viper
3. Krait
4. Cobra

Snakes play a vital role in maintaining the ecological equilibrium as they are the predators of the rats, mites, lizards, insects, frogs. Snakes encompasses a fairly heavy toll of human life in our country. It is mainly due to unawareness about the snake and snake bite management. As a result of this there is delay in correct treatment and failure to perform necessary interventions.

MATERIALS AND METHODS

Cases of snake bite were taken in this study, who was admitted in C.U.SHAH MEDICAL COLLEGE, SURENDRANAGAR. All cases of the poisonous and non-poisonous snake bite were taken in this study. The relevant history regarding the site, time and place of bite was noted and detailed regarding the type, size and special characteristics of snakes. The patient's symptoms, their sequence of development and progression in relation of the time of bite also considered in detail.

Importance was given to: The site of bite and regard to local pain its nature, time of onset and severity.

1. Local swelling, its nature, time of onset and severity.
2. Local discoloration of skin.
3. Local bleeding from bite.
4. Bleeding tendency:
   a. Bleeding gums
   b. Epistaxis
   c. Hemoptysis
   d. Hemetemesis
   e. Maleana
   f. Hematuria
   g. Petechia
   h. Purpura
5. Nausea, vomiting, cold limb, oligouria.
6. Giddiness, headache.
7. CNS features:
   a. Confusion
   b. Unconsciousness
   c. Drowsiness
   d. Convulsion
   e. Diplopia
   f. Dysphagia
   g. Dysphonia
   h. Blurring of vision
   i. Nasal twang & regurgitation
   j. Alteration in taste sensation

Past History: Importance of given to the past history regarding the bleeding tendency, any CNS, cardiac or renal disorder.

Clinical Examination

On admission detailed clinical examination was performed and repeated daily till the patient is discharged, any changed were, carefully noted which include following.

General Examination

Vitals are noted with special emphasis any purpuric spot, bleeding gums or bleeding occurring at any other site.

1. Pallor
2. Cyanosis
3. Petechie
4. Purpura

Local examination

Under mentioned things were noted.

1. Site of bite
2. Local oozing
3. Local temperature
4. Any debris
5. Local application of any material
6. Pattern of fang marks
7. Local discoloration of skin
8. Any local invasion of cut
9. Any intervention of cloth.

Systemic Examination

The detailed examination of respiratory system, cardiovascular system, gastrointestinal system and central nervous system was done.

Special attention was paid on neurological and haematological examination as under:

1. Consciousness of patient.
2. Ocular menifestations: diplopia and blurring of vision.
3. Palatal and pharangealreflexs.
4. Nasal twang and nasal regurgitation.
5. Petechia, purpura and bleeding from any site.

Investigation: All the patients were subjected to relevant investigation depending on the clinical symptoms and signs.

1. Hemogram
   a. Bleeding time by IVY's method.
   b. Clotting time by Lee & White method.
   c. Hemoglobin By sahli'sand acid hematin method.
   d. TLC & DLC.
   e. RBC count, platelet count, prothrombin time.
   f. Peripheral smear examination for all types and morphology.
   g. S.fibronogen

2. Urine analysis
   a. Albumin by sulphosalicyclic acid method.
   b. Microscopy of a centrifuged sample for cellular elements and cost.

3. Blood urea and serum creatinine in patients suspected for renal involvement.
4. Liver function test done as and when required.
5. 12 lead ECG in cardiac manifestation.
6. Fundusexamination, X-ray were done as and when required.

Complications

The following complications were found:

a) Bleeding tendency
b) DIC
c) Circulatory collapse
d) Myocarditis
e) Respiratory failure
f) Bulbar palsy
g) Convulsion
h) Renal failure
i) Cellulitis
j) Abscess
k) Gangrene
l) Shock
m) Coma
n) Death

Treatment

Closed observation and monitoring of the patients was done and most of the cases received ASV, antibiotics, anti-inflammatory agents, analgesics, tetanus toxoids. Blood transfusions were given depending upon requirements. Atropine Neostigmine were given to neurotoxic patients. Assisted respiration and ET was done in the patients having respiratory paralysis. Ventilator was used if required. Anti-histaminic and steroids were given when required for sensitivity reactions of ASV. Surgical treatment was given as and when required. Tetanus toxoid 0.5 ml was given after excluding any bleeding tendency. In patients with bleeding tendency injection TT was with hold and given after improvement of the bleeding diathesis. ASV was given after negative skin test doses. Doses were decided according to the

severity of the poisoning. An antibiotics were prescribed according to wound condition and infection and was continued till proper healing of wound is achieved. Patients presenting with neurotoxicity were treated with inj. Neostigmine and atropine. Initially 0.5 mg 2-5 ampoules were given i.v. or more according to severity and it was increased or tapered according to the response to the treatment. Inj. Atropine 0.6 mg was given i.v prior to inj. Neostihmine to counter act the muscarinic action of neostigmine. This therapy was continued till patients recovered fully from neurological manifestations. Corticosteroids was used in patients with who developed anaphylactic reaction to ASV. Inj. Hydrocortisone and Dexamethasone were given and tapered within 3-4 days of sensitivity. Renal failure was treated with fluids, dieresis, and dialysis if needed. In respiratory failureendotracheal intubation was done and artificial respiration was given as and when given required ventilators were used according to the necessity.

RESULTS

Table 1. showing Incidence of snake bite in various age groups

Age (yrs)	No. Of Cases	Percentage (%)
11-20	28	28%
21-30	32	32%
31-40	24	24%
41-50	8	8%
51-60	3	3%
>60	5	5%
Total	100	100%

The maximum incidence of snake bite was reported in age group of 21-30 yrs.

Table 2. Showing incidence of snake bite in different sex

Sex	No. Of Cases	%
Male	62	62
Female	38	38
Total	100	100

The above table shows that males were predominantly more bitten than females in a ratio of 1.64:1.

Table 3. Showing incidence of time of bite

Time	No. Of Cases	% of total
Day time (8 AM to 8 PM)	56	56
Night time (8 PM to 8 AM)	44	44
Total	100	100

The above table shows that 56% of bites occurred during day time as people are engaged with work during day time.

Table 4. Showing monthly incidence of snake bite

Month	No. Of Cases	% of Total
January	01	1%
February	02	2%
March	02	2%
April	04	4%
May	08	8%
June	17	17%
July	11	11%
August	16	16%
September	13	13%
October	18	18%
November	8	8%
December	0	0%
Total	100	100%

Table shows that highest incidence of snake bites were during June to October i.e. during monsoon months.

Table 5. Showing sites of snake bites

Site	No. Of Cases	% of Total
Lower Limbs	53	53%
Upper Limbs	31	31%
Others	16	16%
Total	100	100%

The above table shows that snake bites were more common in Lower limbs than upper limbs and other sites.

Table 6. Showing incidence of local manifestations

Symptom	No. Of Cases	% of Total
Local Pain	84	84%
Swelling	67	67%
Discolouration	07	7%

The above table shows that incidence of local pain was 84% with swelling in 67% &dicolouration in 7% of cases out of 100 cases.

Table 7. Showing incidence of bleeding manifestations

Symptom	No. Of Cases	% of total
Bleeding manifestation	29	29

Bleeding manifestations was observed in 29 cases out of 100 cases.

Table 8. Showing incidence of neurological manifestations

Symptom	No. Of Cases	% of total
Ptosis	19	100%
Difficulty in Swallowing	3	15.7%
Difficulty in Speech	1	5.2%

Neurotoxic manifestations was observed in 19 cases out of 100 cases, Ptosis was present in 100% cases & difficulty in swallowing & speech was observed in 15.7% & 5.2% respectively in cases of neurotoxic bites.

Table 9. Showing incidence of miscellaneous symptoms

Symoptom	No. of Case	% of total
Headache	10	10%
Giddiness	14	14%
Nausea/Vomiting	38	38%
Perspiration	12	12%
Breathlessness	11	11%

Among the miscellaneous symptoms nausea and vomiting was most common followed by giddiness.

Table 10. Showing incidence of Poisonous and Non Poisonous snake bites

Type	No. Of Cases	% of Total
Poisonous	52	52%
Non Poisonous	48	48%
Total	100	100%

Among all cases poisonous snake bite (52%) were more than non poisonous snake bite (48%).

Table 11. Showing incidence of Vasculotoxic& Neurotoxic snake bites

Type	No. Of Cases	% of Total
Vasculotoxic	29	29%
Neurotoxic	19	19%
Others	4	4%
Total	52	52%

Among poisonous snakebites more cases were seen of vasculotoxic (29%) than neurotoxic (19%).

Table 12. Showing no. of patients who received anit snake venom

	No. of Cases	% of total
Anti snake venom	52	52%

Table shows 52% of poisonous snake bite patients received anti snake venom for envenomation.

Table 13. Showing no. of anti snake venom required

No. of ASV	Total no. of patients	Improved	Expired
1-5	19	19	0
6-10	24	24	1
11-15	5	5	0
16-20	3	3	0
21-25	1	1	0
26-30	0	0	0
Total	52	51	1

Table 14. Showing patients kept on invasive ventilation and its outcome

No. of pts required invasive ventilation	Improved	Expired
3	2	1

Table 15. Showing incidence of different complication

No. of ASV	Total no. of patients	Improved	Expired
1-5	19	19	0
6-10	24	24	1
11-15	5	5	0
16-20	3	3	0
21-25	1	1	0
26-30	0	0	0
Total	52	51	1

Table 16. Showing analysis of cause of death

Cause of Death	No. Of Cases	% of total
Respiratory Paralysis	01	1%
Renal Failure	00	0%
Shock	00	0%

Out of 100 cases admitted at C.U. Shah hospital for snake bite management, mortality was observed only in 1 case, for which respiratory paralysis was the cause of death.

DISCUSSION

This study showed the maximum bites occurring in young age group (21-30 years, 32% followed by 11-20 years, 28%). These groups are engaged with maximum outdoor activities to earn livelihood and therefore more prone to snake bites. The incidence declines in older age groups as they live indoor. Above study showed a marked male predominance (62%) as males are responsible for earning livelihood and are more prone to a snake bites.

Males are engaged in outdoor activities like farming, grazing, watering fields and other agricultural activities. Snake bite in female occurs while handling cow dung, grass in field, feeding cattles, and washing clothes in river. Day time bites (56%) were more as persons are engaged with various activities and night time bites usually occurs due to accidental stamping over a snake. Increased agricultural activities during monsoon season (75%) are responsible for maximum bite during this season. Moreover, monsoon rains will drive the snakes out of their shelters. The study showed that lower limbs (53%) were most common site for snake bite. Maximum bites reported are with poisonous snakes (52%). Patients bitten by non poisonous snake usually do not seek medical care. Hospital figures of poisonous snakes are high as patients are forced to seek medical advice. The above table signifies that local pain (84%) and swelling (67%) were most common local manifestations in patients with snake bites. Bleeding manifestation is more in present study (29%) as cobras and vipers which are hematotoxic snakes are more prevalent (52%) in saurashtraregion. In neurological snake bite ptosis was more common symptom (19%) followed by difficulty in swallowing (3%) and difficulty in speech (1%). The above study shows variation in incidence of complications which are attributed to a variety of snakes present in particular region, the most common complication in present study is bleeding (6%) and renal failure (6%). Respiratory failure was the cause of death in present study (1%).

REFERENCES

Bawaskar, H. S. 2004. Snake venom and antevenom: critical supply issues. JAPI., 52 ; 11-13

JAPI vol.64, August 2016 : A clinic epidemiological profile of neuroparalytic snake bite. Prakash Chandra Pandey *et al.* Pg:18.

Khare, R.K. A study of clinical profile, complications and outcome of patients of snake bite. *BCM hospital khairabad,* Sitapur, U.P.

Nitesh P: Clinical profile of snake envenomation NIMS experience. Department of Medicine, Nizam's Institute of Medical Sciences, Hyderabad.

Parikh, J. Clinical profile of snake bite. Govt. Medical college, Surat, Gujarat.

Patel L: Dissertation submitted to Saurashtra University,

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