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UNKNOWN BITES AND ITS OUTCOME IN CHILDREN.

Paediatrics

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KEYWORDS

INTRODUCTION:

Children are particularly at risk of being bitten by insects, animals, and reptiles. They are usually hospitalized with a bite of unknown etiology.[1,2]

The number of hospitalizations for animal bites of all types, including unknown bites, has increased over the years due to the acceptance of allopathic treatment of these bites achieved through vigorous health education programs. However, a major problem is the lack of consensus on treatment in the hospital. In many tropical and subtropical countries, snakebite envenomation is a major public health problem. Research estimates that at least 421,000 poisonings and 20,000 deaths from snakebites occur each year in these areas.[3,4] Poisonings in children resulting from unknown bites can be an emergency for both the family and the physician. They are a common and preventable cause of morbidity and mortality in children. Children admitted with an unknown bite represent a significant number of emergency tertiary hospital patients. Parents often bring their child to the emergency department immediately without checking the surrounding area for insects, spiders, bees, or scorpions.[5,6,7]

Bites and stings are a common cause of injury in the emergency department (ED). Bites and stings can result in significant trauma, tissue damage, infection, allergy, rabies, disability, psychological impact, and, rarely, death.[8-10] Bites and stings remain a major public health challenge, and the clinical consequences of bites and stings can extend far beyond simple wound care.[11] Identification of bitten and stung individuals remains challenging and incomplete.[12,13]

Patients present with a wide spectrum of clinical manifestations, ranging from asymptomatic bite wounds without clinical features to gross local erythematous, sometimes edematous papules that may be solitary, grouped, or generalized; local erythema, wheals, and urticaria are commonly present. In patients with severely pruritic lesions, scratching may result in skin excoriation. Although rare, some patients may develop anaphylaxis with urticaria, angioedema, tachycardia, dyspnea, hypotension, and wheezing.[14]

Early medical care and disturbed BT /CT were critical for hospitalization. All patients should be evaluated with a BT /CT test. For uncomplicated unknown bites or stings that result in minor local reactions, laboratory or imaging testing is not indicated. They can be managed with supportive care and local wound care. For moderate or severe itching, brief treatment with systemic corticosteroids and oral antihistamines are often helpful. If a secondary infection is present, it should be treated with appropriate antibiotics. In rare cases, anaphylaxis must be treated with epinephrine. Severe poisoning can lead to multiorgan dysfunction and requires laboratory testing.[15]

There are very few studies of unknown bite in children so aimed to unknown bites and its outcome in children in India.

Aims and Objectives:

1.To study the demographic details of patients with unknown bite.
2.To study the duration of hospital stay.
3.To study the outcome of patients with unknown bite.

Methodology:

- Study Type: Prospective observational study
- Study Period: January 2021 - October 2022
- Sample size: 53 patients admitted during study period
- Patient's detailed history taken, thorough general, systemic and local examination performed. Routine blood investigations performed (CBC, BT/CT, LFT, S. Electrolytes).
- Supportive treatment given with IV fluids, baseline antibiotic (amoxicillin - clavulanate), along with local wound care (analgesic gels, limb elevation and dressing for cellulitis)
- Sample size: 53

Inclusion Criteria:

- Children having age <12 years with -
- Unknown or unidentified bite with bite mark
- Local signs symptoms with strong parental suspicion

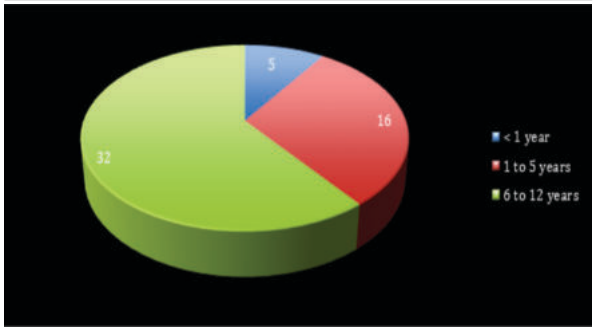
Exclusion criteria:

- History of bite more than 72 hours before presentation
- Dog, cat, monkey, pig bites

RESULTS:

Table No. 01: Distribution of study subjects according to age groups.

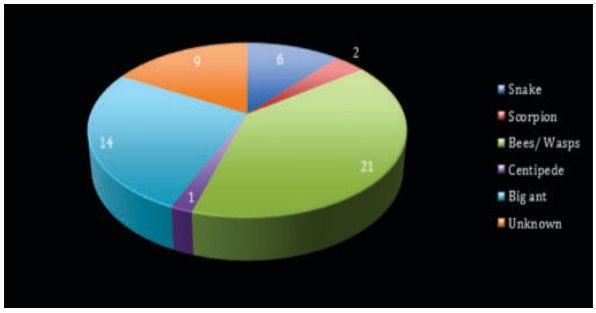
Age group	Number	Percentage (%)
< 1 year	5	9
1 to 5 years	16	30
6 to 12 years	32	60
Total	53	100



Graph No. 01: Distribution of study subjects according to age groups.

Table No. 02: Distribution of study subjects according to type of bite.

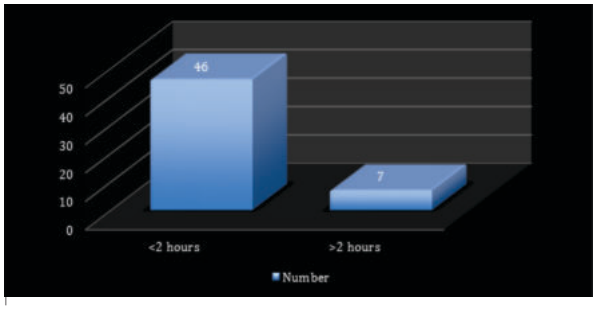
Type	Number	Percentage (%)
Snake	6	11
Scorpion	2	4
Bees/ Wasps	21	40
Centipede	1	2
Big ant	14	26
Unknown	9	17
Total	53	100



Graph No. 02: Distribution of study subjects according to type of bite.

Table No. 03: Distribution of study subjects according to time of admission.

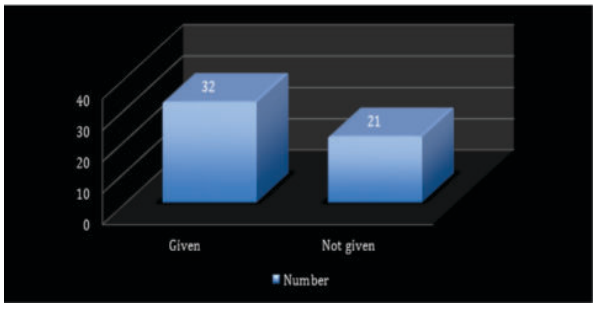
Time of admission	Number	Percentage (%)
<2 hours	46	88
>2 hours	7	12



Graph No. 03: Distribution of study subjects according to time of admission.

Table No. 04: Distribution of study subjects according to first aid.

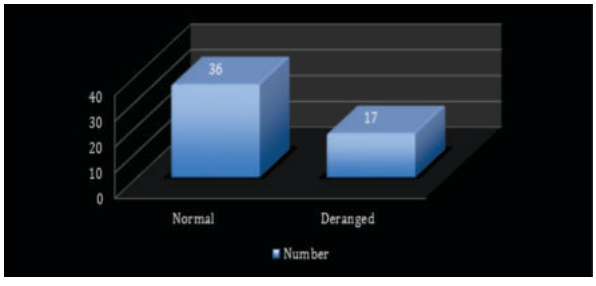
First aid	Number	Percentage (%)
Given	32	60
Not given	21	40



Graph No. 04: Distribution of study subjects according to first aid.

Table No. 05: Distribution of study subjects according to bleeding / clotting time.

Bleeding / Clotting time	Number	Percentage (%)
Normal	36	68
Deranged	17	32
Total	53	100



Graph No. 05: Distribution of study subjects according to bleeding/ clotting time.

DISCUSSION

Children are a vulnerable population for bites and stings. A total of 53 patients who satisfied the above criteria were included in the study. All patients were discharged after symptomatic improvement.

More than 60% patients were between 6 - 12 years old. Most of children were had bite by bees/wasps 40% followed by big ant 26% while 17% were had unknown bite. Most of children 88% were admitted in less than 2 hours. First aid was given in 60% cases while in 40% cases first aid was not given. Bleeding time / clotting time was seen normal in 68% cases while deranged in 32% cases. Similar results were seen in the study done by Sathiadas MG et al, Halder S et al.

CONCLUSION:

Poisoning remains an important cause of morbidity and hospitalization in the pediatric age group. Snakebites are common among school-aged children. Simple measures such as parental education, safe storage, and use of child-resistant packaging and containers for medications could prevent much of the morbidity and mortality associated with childhood poisoning, as there is no effective community-based childhood poisoning prevention program in our country. To some extent, it can be prevented by appropriate clothing such as light-colored pants and long-sleeved shirts, use of mosquito nets, spraying household items with insecticides, and daily checking for ticks and insects in endemic areas or in forest and agricultural areas.

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