

## Minor Injuries Among Under-Fives in a South Indian Village

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*Manuscript received: May 19,  
2008; Initial review: May 30,  
2008;*

*Accepted: June 20, 2008.*

The present study was conducted with the objective to determine the treatment seeking behavior of parents/caretakers for injuries sustained by children under five years of age in rural Southern India. Out of 325 children, 39.7 % were treated by a health personnel, 29% received home remedy while the rest (31.3%) did not receive any treatment. Abrasion (72.6%) was the commonest type of injury observed. 47.3% of injuries were treated within an hour of onset. Commonest home remedies used ranged from antiseptics to folk remedies. Training of parents and caretakers for hygienic and timely treatment of injury is recommended.

**Key Words:** *Children, India, Injury, Treatment.*

**Published online: 2009 Jan1. PII:S097475590800309-2**

Injury can happen anywhere, be it the road, home or playground. Studies on childhood injuries have observed that majority of the accidents occur in the home(1,2). Injuries have potentially serious consequences in terms of both morbidity and mortality. For every accidental death, there are several hundred accident injuries, some of them may be only slight, however some of them may be severe and likely to leave permanent after effects (3). The earlier the treatment is sought, the better it is since it reduces the chances of wound infection, relieves pain and suffering of the child as well as reduces the anxiety of family members. We conducted this study to ascertain the treatment seeking behavior for injuries in under-five children in a rural setting.

### METHODS

The present study was a longitudinal study conducted in Shindoli village, a rural field practice area of the Department of Community Medicine, JN Medical College, Belgaum, Karnataka. The

population of Shindoli village is 6335. This village is located within a radius of 12 km from the JN Medical College and comes under the Mutaga Primary Health Centre. Prior to the study period, a door to door survey was conducted and the number of children in the age group of 0 to 5 years was found to be 325. All the 325 children were included in the study. The study sample included 50 newborns who entered the study at various periods. 80 children were excluded from the study at different periods on completion of 5 years of age.

The cause of injury was determined according to the International Statistical Classification of Diseases and Related Health Problems (Tenth Revision) which are listed from Code V01 to X59 in chapter XX(4). Injuries were then classified into specific type and severity using the Minor Injury Severity Scale(5,6). In the beginning, a cross sectional study was done involving all the 325 children in the village in order to know the age and sex distribution and to collect information regarding

**WHAT THIS STUDY ADDS?**

- A considerable proportion of minor injuries in rural under-five children tend to get neglected or are improperly managed.

socio-demographic variables. Each child was then followed up by fortnightly home visits. In case a child had met with an injury, the details were noted down in a pre-designed and pre-tested proforma for that child. The information was collected by interviewing the parents/guardian of the child after obtaining informed consent. Details were recorded with regard to the type of injury, site of injury, source of first contact care and type of treatment/medication received. A detailed clinical examination of the injured child was also carried out.

**RESULTS**

The incidence of injury in the study children was found to be 3.13 per 100 child months or 0.35 per child per year. The total number of injuries recorded was 135. Maximum number, 51 (38.9 %) of the injuries occurred in the age group of 49-60 months, followed by 28 episodes (21.4%) in the 37-48 months age group. Majority (70.3%) of the accident episodes occurred in boys. Abrasions accounted for majority of the injuries (72.6%), followed by cuts and lacerated wounds (11.8%), avulsions (6.6%), contusions (4.4%), burns (3.8%) and bite wounds (0.8%). In some episodes of accidents, more than one type of injury was observed in the injured child. All the injuries scored a grade of one (trivial injury) according to the Minor Injury Severity Scale(6).

Of 135 injuries, 95 (70.3%) of the injuries received treatment. **Table I** provides details of time elapsed between occurrence and start of treatment for various types of injuries. A little over one third, 53 (39.7%) of the children who had sustained injuries were treated by trained health personnel while 39 (29 %) were treated by a family member. Among those treated by health personnel, 23 (16.8%) were treated by a doctor from our mobile clinic, 14 (10.6%) by private practitioners belonging to either system of medicine, 9 (6.8%) by a doctor from a government or private health center and 7 (5.3%) from a health or *Anganwadi* worker. A variety

of local applications ranging from appropriate antiseptics (such as ointment and solution) to folk remedies (like turmeric, coconut oil, leaves paste or sesame oil) and application of plain bandage were used.

**DISCUSSION**

Our findings are comparable with a study conducted amongst under five children in a Chandigarh slum wherein 22.4% of the children did not receive any treatment(7). Other studies report a larger percent of children having sustained minor injuries to be receiving home treatment(7,8). It is heartening to note that a larger percent of children obtained first aid within an hour and sought treatment from a health care personnel. Also, ointment and antiseptics were used as a part of home remedies. Non-treatment of 29.7% of the cases indicates that people usually tend to ignore such injuries taking them as trivial. In addition to the home remedies used in our study, other studies have reported the use of substances such as raw potato, toothpaste, crushed tablets, nail polish and kerosene oil(9-11). A large number of plants used in tribal and folklore with enormous potential have not been validated for their wound

**TABLE I** TIME ELAPSED BETWEEN OCCURRENCE OF INJURY AND START OF TREATMENT

Type of injury	Received treatment N (%)	Time of treatment		
		<1 h	2 to 6 h	> 6 h
Abrasion (n=98)	60 (61.3)	25 (41.6)	27 (45)	8 (8.4)
Cuts and lacerated wound (n= 16)	16 (100)	9 (56.2)	7 (43.7)	
Avulsion (n=9)	7 (77.8)	4 (51.7)	3 (42.8)	
Bite injury (n=1)	1 (100)		1 (100)	
Contusion (n=6)	6 (100)	2 (33.3)	4 (66.7)	
Burn (n=5)	5 (100)	5 (100)		
Total = 135	95 (70.3)	45 (47.3)	42 (44.2)	8 (8.4)

healing activity(12). It would therefore be important to educate and train parents and child caretakers on appropriate first aid measures and when to seek medical consultation for even apparently mild injuries. It is recommended that a regular ongoing and continuous awareness generation and health education program for the parents and caretakers of the children on hygienic management of injuries should be initiated in rural as well as urban area.

*Contributors:* The work was carried out by AN under the supervision of VAN.

*Funding:* None.

*Competing interests:* None stated.

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