Awareness Regarding Animal Bite Treatment among School Teachers of Mandya City, Karnataka

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Awareness Regarding Animal Bite Treatment among School Teachers of Mandya City, Karnataka

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Abstract

Background: Children by their inquisitiveness, naughty and playful nature are more prone for animal bites. About 50% of Animal bite victims are children. By the virtue of spending more time in the school, children get bitten by animals in and around the school. In such situations, the school teachers are the first persons of contact for a child victim of animal bite. The knowledge and practices of the teacher shall have a major impact in providing correct treatment to children and ensure reduced morbidity & mortality due to animal bites.

Research question: What is the level of knowledge and awareness regarding management of animal bites among school teachers of Mandya City?

Setting and design: A cross-sectional study was conducted for the teachers of all the schools of Mandya city.

Methods and Materials: A pre-designed, pre-tested and structured questionnaire was administered. Data analysis performed using epi info software version 3.3.2

Results: Only 71 (31.14%) of the teachers had complete basic knowledge of the first aid treatment following animal bite which includes wound wash, apply antiseptic, not to apply any irritant and refer to the doctor. 96 (42.48%) teachers knew about the importance of a
single dose of tetanus vaccine. However, only 69 (30.25%) teachers knew about the 5 dose, modern rabies vaccine.

**Conclusion:** The knowledge and awareness regarding the treatment of animal bite victims is not satisfactory among the school teachers of Mandya City.

**Key Words:** School Teachers, Animal Bites, School Children, Knowledge, Awareness.

**Background**

17.4 million animal bites occur every year in India. This means that one person gets bitten by an animal every two seconds. 96.2% of the animal bites are due to dogs, the other animals being cats, monkeys, cattle & wild animals. [1]

Animal bite is a major concern among children. Children by their inquisitiveness, naughty and playful nature are more prone for animal bites. More than 70% of animal bite victims are children aged less than 15 yrs of age. [2]

Animal bites are not only associated with the trauma, pain and suffering but can also cause infections, including those which cause deadly diseases like rabies, tetanus and other infections. [3] Scarring and disfigurement are the late complications.

Children by virtue of spending more time in the school get bitten by animals in and around the school. In such situations, the school teacher will be the first person of contact for the child who is a victim of animal bite. The knowledge and practices of the teacher shall have a major impact in providing correct treatment to such children and ensure reduced morbidity & mortality due to animal bites. In this study, the school teachers of Mandya city were assessed for the knowledge regarding treatment of animal bites among school children.
Aim:
To assess the knowledge of teachers regarding management of animal bites

Setting and design:
There are a total of 121 schools in Mandya City including all government, private and aided schools. Written request was sent to all the administrative heads of the schools. Meetings were held with headmasters’ / head mistresses and principals of the schools to decide on a number of teachers their school could spare for the study. 113 schools agreed to participate in the study. The Headmasters’ / Principals’ of the schools agreed on deputing two teachers from their school to participate in the study. Every school deputed two teachers (one of the teacher compulsorily being the physical education instructor) from their institutes and the total sample turned out to be 226. A cross-sectional study was conducted during August & September 2010.

Material and Methods:
All the 226 teachers were invited to assemble in the auditorium of our medical college on a pre-specified day and time. The participants were given a pre-designed & pre-tested, semi-structured questionnaire on animal bite management (reptile bites were excluded) for assessment of knowledge regarding treatment of animal bites. The questionnaire was available in English and in the regional language Kannada. Kannada questionnaires were back translated into English before analysis.

Statistical analysis: The data was entered in Microsoft excel and analyzed using epi info software version 3.3.2.
Results

A total of 226 teachers from 113 schools participated in the study. 97 (42.9 %) of the participants had knowledge that animal bites can cause rabies, 83 (36.7%) tetanus and 46 (20.4%) other infections.

Table 1: Distribution of participants according to knowledge of diseases caused by animal bites

<table>
<thead>
<tr>
<th>Disease</th>
<th>Rabies</th>
<th>Tetanus</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware</td>
<td>97 (42.9 %)</td>
<td>83 (36.7%)</td>
<td>46 (20.4%)</td>
</tr>
<tr>
<td>Not aware</td>
<td>129 (57.15)</td>
<td>143 (63.2%)</td>
<td>180 (79.6%)</td>
</tr>
<tr>
<td>Total</td>
<td>226 (100.00%)</td>
<td>226 (100.00%)</td>
<td>226 (100.00%)</td>
</tr>
</tbody>
</table>

Majority 187 (82.74%) thought dogs, 149 (65.93%) thought cats, 56 (24.78%) thought that monkey bites can cause diseases. 201 (88.9%) knew that diseases can be transmitted by bites while only 25 (11.1%) knew that licks & scratches from animals can also transmit diseases.

140 (62.2 %) knew that rabies is caused by virus and 65 (28.6 %) knew that tetanus is caused by bacteria. 171 (75.63 %) teacher were of the opinion that rabies was a curable disease and 52 (22.8 %) were of the opinion tetanus was a curable disease.
Table 2: Distribution of teachers according to correct knowledge regarding treatment of animal bites among the children

<table>
<thead>
<tr>
<th>Treatment method</th>
<th>Number of teachers in favor</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wash the wound with soap &amp; water</td>
<td>71</td>
<td>31.41</td>
</tr>
<tr>
<td>Apply antiseptics to the wound</td>
<td>137</td>
<td>60.61</td>
</tr>
<tr>
<td>Should not apply irritants to the wound</td>
<td>169</td>
<td>74.78</td>
</tr>
<tr>
<td>Refer the victim to a doctor</td>
<td>155</td>
<td>68.58</td>
</tr>
<tr>
<td>Victim should receive tetanus vaccine</td>
<td>112</td>
<td>49.56</td>
</tr>
<tr>
<td>Tetanus vaccine is single dose</td>
<td>96</td>
<td>42.47</td>
</tr>
<tr>
<td>Victim should receive rabies vaccine</td>
<td>152</td>
<td>67.26</td>
</tr>
<tr>
<td>Rabies vaccine is 5 doses</td>
<td>69</td>
<td>30.53</td>
</tr>
</tbody>
</table>

Only 71 (31.41%) teachers stressed on washing the wound with soap and water. 137 (60.62%) had knowledge regarding application of antiseptics.155 (68.56%) advised children to visit a doctor following animal bite and 169 (74.77%) were of the opinion that application of irritants like turmeric, talcum powder or lime should be discouraged.

155 (68.58%) were not aware of the importance of washing the wound with soap and water in the treatment of animal bites. 89 (39.38%) did not recommend application of antiseptics. 57 (25.22%) had advised some irritant in case of animal bites. 71 (31.42%) said they would refer only severe animal bite cases to a doctor. 137 (60.62 %) teachers were of the opinion that dressing and bandage had to be applied to the bite wound immediately after animal bite.
118 (52.10 %) of the participants were of the opinion that a animal bite victim should receive 14 injection around the stomach. Only 69 (30.25 %) knew that only 5 doses of modern vaccine should be taken.

78 (34.45 %) thought a person suffering from rabies disease, acts like an animal. 76 (33.61%) thought he / she will be scared of drinking water. 44 (19.32 %) thought he / she would go mad.

In order to reduce animal bites among children, 143 (63.3%) teachers opined that children should be taught not to tease animals, 55 (24.33%) opined that children should be taught to play safely with pets, 28 (12.39%) teachers opined that children should be taught to immediately report any animals bite to elders.

However, majority of the teachers 207 (91.59 %) suggested immunizing the pet animals should be made compulsory to reduce diseases due to animal bites,162 (71.68 %) teachers thought that the government should take measures to reduce the stray dog population and 112 (49.57 %) thought tetanus injection can reduce the diseases caused due to animal bites.

**Conclusion**

Only 71 ( 31.14%) of the teachers had complete basic knowledge of the first aid treatment following animal bite which includes wound wash, apply antiseptic, not to apply any irritant and refer to the doctor.

96 (42.48%) teachers knew about the importance of a single dose of tetanus vaccine. However, only 69 (30.25%) teachers knew about the 5 dose, modern rabies vaccine.

The study findings are similar to the NICD multi-centric study conducted on knowledge regarding management of animal bites among the general population. [4,5]
Recommendations:

The knowledge about first aid management of animal bites is low among the school teachers of Mandya city. There is need to create awareness amongst the school teachers regarding epidemiology of the diseases following animal bite and the merits of prompt and appropriate first aid and post exposure treatment through enhanced IEC activities like awareness sessions and workshops.

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Conflict of interest: The authors declare there is no conflict of interest.

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