Survey on Oral Trauma of The Children in Gifu City Schools

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Purpose

Facial/oral trauma in schools, including physical education classes and extracurricular activities, is an important social issue. In 1996, a nationwide survey was conducted by the Japanese Society of Pediatric Dentistry, and in another survey, the School Health Association collected data; however, these surveys included only patients who consulted hospitals. Trauma during childhood may influence general development and growth if left untreated. In this study, we investigated the status of oral trauma.

Methods

The subjects were 46,888 children in 124 schools in Gifu City: 3,685 children in 36 public day nurseries/kindergartens, 22,206 children in 48 elementary schools, 10,506 students in 23 junior high schools, 9,890 students in 11 high schools, and 942 students in 6 specific educational schools. The specific educational schools included handicapped children's schools, schools for the deaf/ blind, and schools in institutions for handicapped children. The responses were collected from 71 (57%) of the 124 schools to which a questionnaire was delivered. This survey was conducted from April 1, 2004 until March 31, 2005.

Our questionnaire involved age, gender, date/place/state/ site of injury, and treatment. A check sheet was delivered to the above schools via educational committees, and nurse teachers and nursery teachers were requested to report all cases of oral cavity-associated trauma in schools.

Results and Discussion

Oral trauma was reported in 477 of 27,865 children(1.7%) in the schools from which the responses could be collected: 76 of 1,998 pre-school children, 372 of 19,754 elementary school children, 15 of 3,385 junior high school students, 4 of 2,256 high school students, and 10 of 472 specific educational school childrenTable.1

The pre-school children in the day nurseries/kindergartens showed the highest incidence, followed by the percentages for the specific educational schools, elementary schools, junior high schools, and high schools. Oral trauma was frequent in the pre-school children and specific educational school children because of immature growth and handicapped conditions. In the junior/ senior high schools, the incidence of oral trauma was low. This was because we focused on accidents in schools; the results of this survey do not include any accident during extracurricular activities.

Concerning gender, the incidence of oral trauma in the boys was more than 2 times higher than that in the girls. This was consistent with the results of other studies.

Oral trauma was frequent between April and June as well as between September and December. The incidence was low in winter and in August. In particular, the incidence was low in August; this was possibly because school activities were reduced during the summer holidays. Furthermore, the incidence was high in warm seasons.

Oral trauma was frequent from 10:00 until 15:00 (school hours). However, oral trauma also occurred between 7:00 and 9:00 as well as between 16:00 and 18:00 (when going to and returning from school).

Concerning the place and state of trauma, 188 episodes occurred during school recess, comprising the highest percentage, followed by 56 episodes during lessons other than physical education, 51 episodes during physical education lessons, and 38 episodes when commuting to and from school(Fig.1).

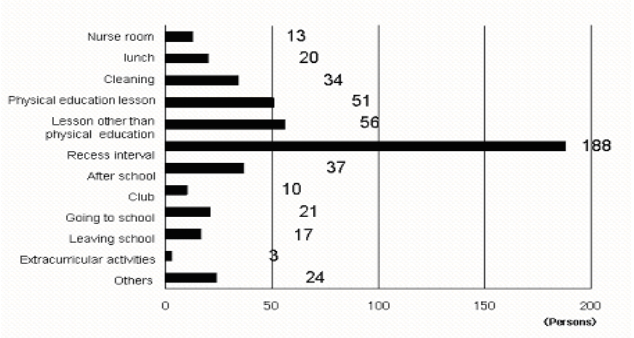
Accidents were frequent in the absence of teacher supervision, that is, during recess intervals, after school, and while cleaning the classroom.

Concerning the site of injury, oral soft tissue was injured in more than 50% of the episodes, followed by the teeth and jaw (Fig.2). However, there was no severe case.

The most common treatment after injury was to bring the students to a dental clinic, followed by disinfection and icing. The percentage of students who were treated in the school was similar to that of students who were brought to a dental clinic.

Table.1

	No of Children	No of Trauma	Rate of Trauma(%)
Nursery/ Kindergarten	1,998	76	3.8
Elementary School	19,754	372	1.9
Junior High School	3,385	15	0.4
High School	2,256	4	0.2
Special Education School	472	10	2.1
Total	27,865	477	1.7



Furthermore, the absence of treatment was rare; most students were treated. However, 50% or less of the students consulted hospitals (Fig.3). Some of the students who did not consult a hospital may have required consultation.

Conclusion

Our survey on the status of oral trauma in schools in Gifu City showed an incidence of 1.7%. The incidence was higher in younger children. Oral trauma was most frequent during recess intervals. Preventive strategies should be reviewed. In addition, only 50% or less of the injured students consulted hospitals; therefore, teachers should instruct students and their parents to consult a hospital.

Reference

Japanese Society of Pediatric Dentistry, Survey on dental trauma of children in Japan: 34(1) 1-20,1996.

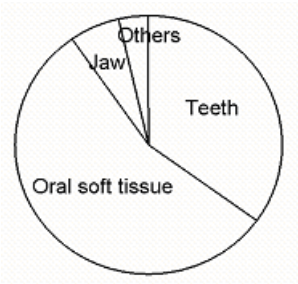


Fig2

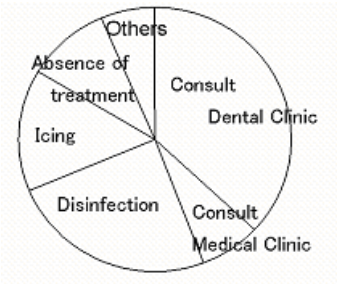


Fig.3