

Available online at www.sciencedirect.com

ScienceDirect

Biomedical Journal

journal homepage: www.elsevier.com/locate/bj

Original Article

A 2-year retrospective study of pediatric dental emergency visits at a hospital emergency center in Taiwan

Chia-Pei Jung ^a, Aileen I. Tsai ^{a,*}, Ching-Ming Chen ^b^a Department of Pediatric Dentistry, Chang Gung Memorial Hospital at Linkou, Taoyuan, Taiwan^b Department of Emergency Medicine, Chang Gung Memorial Hospital at Linkou, Chang Gung University College of Medicine, Taoyuan, Taiwan

ARTICLE INFO

Article history:

Received 3 June 2015

Accepted 4 November 2015

Available online 9 August 2016

Keywords:

Dental caries

Emergency

Pain

Pediatric dentistry

Trauma

ABSTRACT

Background: There is a paucity of information regarding pediatric dental emergencies in Taiwan. This study investigates the prevalence and characteristics of the pediatric dental emergency services provided at a medical center.

Methods: This study included a retrospective chart review of patients under 18 years of age with dental complaints who visited the Emergency Department (ED) of Linkou Medical Center of Chang Gung Memorial Hospital from January 2012 to December 2013. Information regarding age, gender, time/day/month of presentation, diagnosis, treatment, and follow-up was collected and analyzed. Statistical analysis included descriptive statistics and Pearson's Chi-square test with the significance level set as $p < 0.05$.

Results: This study revealed that dental emergencies in the medical center ED were predominantly related to orodental trauma (47.1%) and pulpal pain (29.9%). Most patients were male ($p < 0.001$) and <5 years of age ($p < 0.001$). The most frequent orodental trauma was luxation, both in primary and permanent dentition. The major management for dental emergencies was prescribing medication for pulp-related problems and orodental trauma. The follow-up rate of orodental trauma was the highest ($p < 0.001$).

Conclusions: For children, trauma and toothache constituted the most common reasons for dental emergency visits at a hospital emergency center in Taiwan. While dental emergencies are sometimes unforeseeable or unavoidable, developing community awareness about proper at-home care as well as regular dental preventive measures can potentially reduce the number of emergency visits.

* Corresponding author. Department of Pediatric Dentistry, Chang Gung Memorial Hospital at Linkou, 5, Fusing St., Gueishan, Taoyuan 333, Taiwan. Tel.: +886 3 3281200ext.8327; fax: +886 3 3282173.

E-mail address: ait001@cgmh.org.tw (A.I. Tsai).

Peer review under responsibility of Chang Gung University.

<http://dx.doi.org/10.1016/j.bj.2016.06.004>

2319-4170/© 2016 Chang Gung University. Publishing services by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

At a glance commentary

Scientific background on the subject

There is a paucity of information regarding pediatric dental emergencies for children in Taiwan. This retrospective chart review study investigates the prevalence and characteristics of pediatric dental emergency services provided at a medical center over a 2-year period.

What this study adds to the field

This study reveals that the majority of pediatric dental emergencies are either dental trauma or pulp-related problems. This information can be used to help improve future Emergency Department services.

The Emergency Department (ED) visit is generally preceded by an urgent condition due to injury, accident, disaster, or disease that requires immediate medical management [1]. It is also common for children to visit the ED for dental problems. The American Dental Association (ADA) and the American Association of Oral and Maxillofacial Surgeons (AAOMS) define dental emergencies as jaw and alveolar bone fractures, avulsed or displaced teeth, fractured teeth with pulp exposures, acute alveolar abscess, upper airway impairment, oral mucosal lacerations, acute dental pain and infection, and uncontrolled bleeding [2]. Previous studies suggested that the main reasons for children's ED visits were toothaches associated with dental caries, dental trauma, swelling of soft tissue, and tooth eruption problems [3–6]. In a 9-year study of ED visits conducted at a children's hospital and medical center in the US, trauma accounted for 60% of the emergencies, while dental infections as the reason for the visit increased from 30 to 44% in a 4-year period [7]. According to a report in 2006, the prevalence of ED visits for pediatric dental care has been increasing in the last two decades [5].

The Linkou Medical Center of Chang Gung Memorial Hospital (LMCCGMH) is the largest hospital in Taiwan and has an ED that functions as one of the emergency medical centers and serves a wide geographic area in Northern Taiwan. About 100,000 patients visit the ED of LMC at CGMH each year. Among these visitors, more than 1000 have dental complaints.

There is a paucity of information regarding the prevalence and dental emergency types of ED visits in a medical center setting in Taiwan, and the characteristics of pediatric dental emergency of LMCCGMH have never been reported. Therefore, the objective of this retrospective study was to investigate the prevalence and characteristics of the pediatric dental emergency visits of the CGMH ED over a 2-year period.

Subjects and methods

A retrospective chart data review of patients under 18 years of age with dental complaints who visited the CGMH ED from January 2012 to December 2013 was conducted after obtaining Institutional Research Ethics approval from CGMH (IRB

number: 103-1950B). Electronic medical records were reviewed by a single pediatric dentist (C/PJ). Statistics were then derived from the data set. Standard quantitative analyses were conducted using Microsoft Excel formulas (2013, Microsoft Corporation). Statistical analysis was carried out descriptive statistics and Pearson's Chi-square test with the significance level set as $p < 0.05$ using Statistical Package for Social Science software (version 19.0; SPSS Inc., Chicago, Illinois, USA).

The following information was collected:

- The time, day, and month of a patient's ED visit
- Patient demographics: age, gender
- Diagnosis (pulp-related problems, orodental trauma, eruption-related problems, orthodontics or space maintainers-related problems, bleeding, ulceration, etc.)
- Diagnosis of pulp-related problems: primary or permanent tooth and area of tooth (upper anterior, upper posterior, lower anterior, and lower posterior) were recorded. In addition, the presence of swelling or abscess was noted
- Diagnosis of orodental trauma: defined as those involving injuries to the teeth, soft tissues and jaws. Information about the type of tooth (primary or permanent) and its classifications of trauma were recorded. The classification includes injuries to the teeth, supporting structures, gingival, and oral mucosa [8]
- Treatment: consultation and oral hygiene instruction only, dental treatment only (including local anesthesia injection), medication only, dental treatment with medication and oral hygiene instruction.
- Utility rate of dental X-rays in dental emergency room (yes or no)
- Whether a follow-up visit in the dental Out-patient Department within 2 weeks was needed.

Results

From January 2012 to December 2013, a total of 397 children with dental problems had visited LMCCGMH for dental emergencies, which represents 0.77% (397/51766) of all pediatric patients in ED during the 2-year period. Six cases were excluded due to incomplete chart data. Data were available for a total of 391 participants.

The number of visits of patients with dental problems peaked in December and January (23.8%) [Fig. 1]. Two hundred and thirty-three patients (59.6%) visited on weekends. The peak time of dental emergency visits was between 21:00 and 24:00 (26.1%) [Fig. 2].

Patient demographics

Of 391 patients, there were 235 males (60.1%) and 156 females (39.9%) ($p < 0.001$). Ages ranged from 2 days to 17 years old, with a mean of 6.37 years. Most children seeking emergency dental services (176/391, 45.0%) were 4 years of age or younger ($p < 0.001$). The age distribution for children visiting dental ED is presented in Fig. 3. The peak age of pulp-related problems was 4 years old, whereas the peak age of trauma was 2 years old.

Download English Version:

<https://daneshyari.com/en/article/5524660>

Download Persian Version:

<https://daneshyari.com/article/5524660>

[Daneshyari.com](https://daneshyari.com)