



# MEDICAL EMERGENCIES; ASSESSMENT AND ATTITUDES IN THE DENTAL SETTINGS OF CITY HYDERABAD.

1. BDS, (MSc- Trainee)  
Department of Community  
Dentistry Faculty of Dentistry,  
LUMHS, Jamshoro.
2. MBBS, FRCS  
Associate Professor  
Department of General Surgery  
LUMHS, Jamshoro.
3. BDS, MSc  
Assistant Professor  
Department of Community  
Dentistry Faculty of Dentistry,  
LUMHS, Jamshoro.
4. BDS, FCPS  
Associate Professor  
Oral & Maxillofacial Surgery  
LUMHS, Jamshoro.

**Correspondence Address:**  
Dr. Suneel Kumar Punjabi  
Flat No: 307 3<sup>rd</sup> floor Citizen Plaza  
Opp Aga Khan Hospital  
Main Jamshoro Road,  
Qasimabad, Hyderabad  
drsunilpanjabi@yahoo.com

**Article received on:**  
18/07/2016

**Accepted for publication:**  
10/03/2017

**Received after proof reading:**  
06/05/2017

## INTRODUCTION

Currently preponderance of population including children, youngsters and elders are subjected to general dental checkup and treatment. As the eminence of health care is progressing and life expectancy is rising, so treating elderly and medically compromising patients with great care is necessary for dentists also.<sup>1</sup> Medical emergency is an abrupt arrival of an ill health or grievance that is sudden and causes an instant threat to patient's life.<sup>2</sup>

Although the incidence is small, medical crisis can occur in the dental settings and some of them can be warning for serious problems. Anxiety, Vasovagal syncope, anaphylactic shocks, hypoglycemia, hyperventilation syndrome, epileptic fits etc are some of the common emergencies that can be stumble in the dental

**Dr. Priya<sup>1</sup>, Dr. Ambreen Munir<sup>2</sup>, Dr. Nida Talpur<sup>3</sup>, Dr. Suneel Kumar Punjabi<sup>4</sup>**

**ABSTRACT... Objectives:** To assess and manage medical emergencies in the dental setups of Hyderabad city. **Methodology: Study Design:** Descriptive Cross Sectional study. **Setting:** General and Specialist dentists of Hyderabad city. **Period:** June 2015 to January 2016. In this study population of 187 dentists were enlisted practicing either in public or private setup of Hyderabad, Sindh. Questionnaire designed to obtain information about their experience. **Results:** (59.89%) of the graduate dentists having less than 5 years clinical experience and (40%) have clinical experience of more than 5 years, qualification, 114 (60.63%) of the practitioner had fundamental dental aptitude and 73 (39.0 %) were specialists with different postgraduate aptitude. Medical emergency workshops attended, (60.96%) General dentists and Specialist had undertaken BLS course, commonly occurring emergency was vasovagal syncope with the prevalence of 103(55.0%) and availability of drugs and equipment's were Oral Glucose (90%), Aspirin (86%) and Sprit Ammonia (78%) usually available drugs kept by the Clinical Setup to handle the emergency procedures. **Conclusion:** Dental practitioners of city Hyderabad are able to identify and handle medical crisis, however most of the doctors either not properly trained to contract with these circumstances or they have poor assets to deal with medical emergencies. Improvement in knowledge of dentists through speculative and demonstrable educational courses, availability of emergency drugs, equipment's and advance groundwork for the emergency management of the patients is required.

**Key words:** Basic Life Support, Clinical Setups, Medical Emergencies.

**Article Citation:** Priya, Munir A, Talpur N, Punjabi SK. Medical emergencies; assessment and attitudes in the dental settings of city Hyderabad. Professional Med J 2017;24(5):665-669. DOI: 10.17957/TPMJ/17.3533

setups.<sup>3</sup>

It is hard to find a dental practitioner who is competent in efficiently treating medical emergencies and/or urgencies that could occur while performing dental procedures, because this issue is discussed only superficially in many undergraduate courses.<sup>4</sup> in spite of the severity or type of the emergency/urgency, it is important that the dentist should be able and feel safe enough to manage Basic Life Support (BLS), know whom to ask for help, and be trained to perform it, in addition to knowing how to compact with emergency equipment.<sup>5</sup>

On the other hand, some factors can decrease the risk of medical emergencies such as thorough evaluation of patient's medical history, physical examination and preparedness for

possible changes in treatment plan in case of emergency.<sup>6,7,8</sup>

Every dental setting should be ready to handle all probable medical emergencies effectively. Such preparedness would include knowledge of the clinician, training of clinical staff and availability of emergency drugs and equipment in the dental settings.<sup>9,10</sup>

This study aims to evaluate the knowledge & attentiveness of dental practitioners to manage mostly stirring emergencies in dental settings of Hyderabad city.

**METHODOLOGY**

The descriptive Cross Sectional study was conducted on General and Specialist dentists of Hyderabad city. A self-administered 9 close ended questions were conducted to evaluate the knowledge and preparedness of the respondents to diagnose and handle medical urgencies in their setups. Questionnaire designed to obtain information about their experience, qualification, Medical emergency workshops attended, commonly occurring emergencies and availability of drugs and equipment’s to handle the emergency procedures.

A pilot study was conducted on 25 dental clinics that were selected randomly; based on their doubts related to the questions, the questionnaire was modified. Reliability of the questionnaire was determined by using Cronbach’s alpha coefficient test, which gave a value of 0.72.

In this study population of 187 respondents were enlisted practicing either in public or private setup of Hyderabad, Sindh, from June 2015 to January 2016. After taking informed consent, Single researcher gathered questionnaire data by meeting with respondents. No tracking system was used to conclude who responded and who did not, in order to ensure vagueness.

Data collection was done by using the SPSS version 22.0 to analyze the data using descriptive statistics. Descriptive statistics were computed

and differences between groups were assessed and presented in the form of tables and graphs.

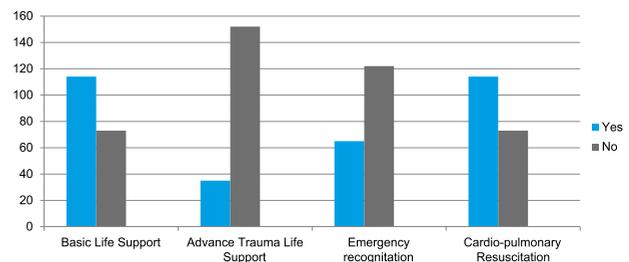
**RESULTS**

Total 187 responded were enrolled in this study, male dentist were 125 (66.84%) and female dentist were 62 (33.16%). 114 (60.63%) of the respondents had basic dental aptitude and 73 (39.0 %) were specialists with different postgraduate aptitude. Majority (59.89%) of the graduate dentists having less than 5 years clinical experience and (40%) have clinical experience of more than 5 years (As shown in Table-I).

Variables	
Gender	
Male	125 (66.84%)
Female	62 (33.16%)
Age in years	
25 years to 30 years	62(33.0%)
31 years to 35 years	42(22.45%)
36 years to 40 years	52(27.80%)
41 years and Above	31(16.5%)
Qualification	
General Dentist	114(60.63%)
Specialist	73(39.0%)
Experience	
Less than 5 years	112(59.89%)
More than 5 years	75(40.0%)

**Table-I. Demographic characteristics of the respondents**

Different kinds of workshops attended by dental practitioners for medical emergency diagnosing and management are summarized in Figure-1.



**Figure-1. Training received by respondents**

Oral Glucose (90%), Aspirin (86%) and Sprit Ammonia (78%) were usually available drugs present in the Clinical Setup.

Around (80%) of the clinical setup did not have oxygen supply dispenser for supplemental oxygenation.

Most commonly (92%) of these clinical setup had sphygmomanometer to blood pressure and it's monitoring. Emergency drugs and equipment owned by the Clinical setup were shown in Figure-2.

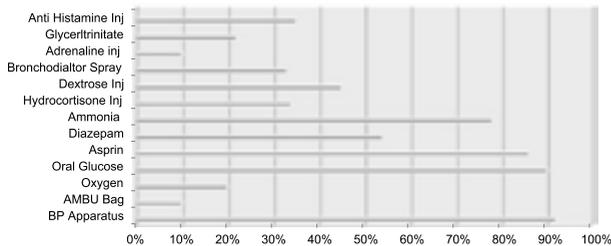


Figure-2. Emergency drugs & equipment's available at setup

Table-II. Showing the distribution of questionnaires asked by respondents of study with their answers.

**DISCUSSION**

In any emergency management, the ability to efficiently give basic life support (BLS) to patients play primary and important roll.

In current study only (60.96%) General dental practitioners and Specialist had commenced BLS course.

The American Dental Association (ADA) recommends all dental practitioners should receive regular training in BLS.<sup>21</sup>

Chandrasekaran et al.<sup>11</sup> conceded a study to evaluate knowledge of BLS among medical, dental, nursing students and doctors and concluded that their knowledge was incredibly poor and needed to be enhanced. Similarly, Sudeep et al.<sup>12</sup> conducted a study to assess the awareness of BLS among candidates and teaching staff in a dental college and concluded that their knowledge should to be improved and updated. Kumarswami et al. warn regarding the situation.<sup>13</sup>

In present study (60.90%) participants answered to have been trained in cardiac pulmonary resuscitation (CPR), whereas study done by Gupta et al.<sup>14</sup> have answered that 18.5% undergraduates & 25% postgraduates received guidance in CPR; but in a study by Atherton et al.<sup>6</sup> 93.9% and 98.9% recalled training in CPR during undergraduate & post-graduation respectively.<sup>15</sup>

Totally, (76.4%) of the general dentists and specialist had encountered at least one emergency event in the last year. Previous studies have shown the high rates of emergency events in dental clinical setups. In a study performed by Girdler and Smith, Bayat m et al has found the rate of 0.7 cases per dentist each year.<sup>16,17</sup>

Questions	Yes	No
1- Do you complete a written medical history of your patients?	96(51.3%)	91(48.7%)
2- Have you ever recognize any medical emergency?	143(76.4%)	44(23.5%)
3- Have you administrated any drug by I/V, I/M, Sc Route in last year?	132(70.5%)	55(29.2%)
4- Do you feel the need for retraining in the field of medical emergencies?	117(62.56%)	70(37.43%)
5- Did you have any emergency event happened for your patients during the previous year?	104(55.6%)	83(44.38%)
A- Syncope / Faint	103(55.0%)	84(44.9%)
B- Hypoglycemic Shock	89(47.5%)	98(52.4%)
C- Asthma Attack	25(13.3%)	162(86.6%)
D- Thyroid Strom	6(3.2%)	101(54.0%)
E Allergic Reaction	12(6.4%)	175(93.5%)
F- Seizures	32(17.11%)	155(82.8%)
G- Angina	16(8.5%)	171(91.44%)
H-Orthostatic hypotension	4(2.13%)	183(97.8%)
I- Adrenal suppression	01(0.5%)	186(99.46%)
J- Hypotension of pregnancy	07(3.74%)	180(96.25%)
K- Hyperventilation syndrome	06(3.2%)	101(54%)

Table-II. Questionnaire replied by respondents

A probable reasons for the lower percent of medical emergencies in Babol can be obtaining a thorough medical history from the patients. About 94% of the dentists in Babol completed the medical history of their patients

In the current study, the most prevalent emergency was vasovagal syncope, which might have been due to anxiety and fear from dental treatments in dental office. Therefore, it can be concluded that dentists may have to pay more attention to their patients before starting the procedures. In a study performed by Mehdizadeh M et al,<sup>18</sup> the most prevalent emergencies were reaction to anaesthetic agents, epilepsy, angina pectoralis and hypoglycemia. According to Malamed, the most reported cases of medical emergencies were hyperventilation, epilepsy and hypoglycemia.<sup>19</sup> possibly; the discordance is because of the difference in the study population, their probable systemic diseases and the difference in performed treatment modalities. However, there is increased incidence of vasovagal syncope in study performed by Jodalli PS et al. and Girdler et al.<sup>20,16</sup>

Sixty two percent of the general dentist and specialist felt the need for retraining in the field of medical emergencies. doubtless, because the undergraduate students in dental schools are not directly responsible for the accidental events, they do not percept the consequence of medical emergencies as they ought to and these results were similar with studies done in past by Mehdizadeh M et al, Jodalli PS 1 et al.<sup>18,20</sup>

## CONCLUSION

Dentists of Hyderabad city are capable to diagnose and manage medical crisis occurring while performing dental procedures, conversely most of them are either not appropriately trained to contract with these conditions or they have poor assets to deal with medical urgencies. Improvement in knowledge of dentists through speculative and demonstrable educational courses, availability of emergency drugs, equipment's and alertness of doctors for managing medical crisis is needed.

Copyright© 10 Mar, 2017.

## REFERENCES

1. Akbari N, Raeesi V, Ebrahimipour S, Ramezanzadeh K. **Dentists' awareness about management of medical emergencies in dental offices Birjand-2014.** Sch J Dent Sci. 2015; 2(4):285-89.
2. Wikipedia. Encyclopedia. **Medical Emergency. C2009 [updated on 15th April 2009. Cited on 25th April 2009]** Available from [http://en.wikipedia.org/wiki/Medical\\_emergency](http://en.wikipedia.org/wiki/Medical_emergency)
3. Gbotolorun OM, Babatunde LB, Osisanya O, Omokhuale E. **Preparedness of government owned dental clinics for the management of medical emergencies: a survey of government dental clinics in Lagos.** Nig Q J Hosp Med. 2012; 22(4):263-7.
4. Adewole RA, Sote EO, Oke DA, Agbelusi AG. **An assessment of the competence and experience of dentists with the management of medical emergencies in a Nigerian teaching hospital.** Nig Q J Hosp Med. 2009 Sep-Dec; 19(4):190-4.
5. Stafuzza TC, Carrara CFC, Oliveira FV, Santos CF, Oliveira TM. **Evaluation of the dentists' knowledge on medical urgency and emergency.** Braz Oral Res., (São Paulo) 2014; 28(1):1-5
6. Jodalli PS, Ankola AV. **Evaluation of knowledge, experience and perceptions about medical emergencies among dental graduate (Interns) of Belguam city, India.** J Clin Exp Dent 2012; 4(1):14-18.
7. Malamed SF. **Medical emergencies in the dental office, 5th ed.** Missouri: Mosby, Elsevier; 2007.pp. 59-104.
8. Hupp JR, Ellis III E, Tucker MR. **Contemporary Oral and Maxillofacial Surgery, 5th ed.** Missouri: Mosby, Elsevier; 2008.pp. 21-39.
9. Carvalho RM, Costa LR, Marcelo VC. **Brazilian dental students' perceptions about medical emergencies: a qualitative exploratory study.** J Dent Educ 2008; 72(11):1343-9.
10. Hassan SH, Shah I, Azhar M, et al. **Management of medical emergencies in dental practice- An audit.** Pak Armed Forces Med J 2011; 61(4):602-5.
11. Chandrasekaran S, Kumar S, Bhat SA; **Awareness of basic life support among medical, dental, nursing students and doctors.** Indian J Anaesth. 2010; 54(2):121.
12. Sudeep C, Sequeira P, Jain J, Prataap N, Jain V, Maliyil M, **Awareness of emergency drugs uses among**

- students and teaching faculty in a dental college in Coorg, Karnataka. J Indian Assoc Pub Heal Dentist. 2014; 12(3):185.
13. Kumarswami S, Tiwari A, Parmar M, Shukla M, Bhatt A, Patel M; **Evaluation of preparedness for medical emergencies at dental offices: A survey.** J Inter Soci Prevent Commun Dentist. 2015; 5(1):47.
  14. Gupta T, Aradhya MR, Nagaraj A. **Preparedness for Management of Medical Emergencies among Dentists in Udupi and Mangalore, India.** J Contemp Dent Pract. 2008; 5: 92-9
  15. Atherton GJ, McCaul JA, Williams SA. **Medical emergencies in general dental practice in Great Britain Part 3: perceptions of training and competence of GDPs in their management.** Br Dent J 1999; 186: 234-7
  16. Girdler NM, Smith DG. **Prevalence of emergency events in British Dental practice and emergency management skills of British.** Resuscitation. 1999; 2:15-67.
  17. Bayat M, Malkmian L, Baheri F. **Evaluation of emergency equipment and drugs in karaj urban dental clinics and the ability of dentists to use them.** JIDA 2005; 17(2):105-110.



*“Never let the things you want make you forget the things you have.”*

**Unknown**

**AUTHORSHIP AND CONTRIBUTION DECLARATION**

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Dr. Priya	Data collection & Results	
2	Dr. Ambreen Munir	Concept & Study design	
3	Dr. Nida Talpur	Discussion, References	
4	Dr. Suneel Kumar Punjabi	Intro, abstract & Proof reading	