



PERCEPTION ABOUT MEDICAL EMERGENCY AMONG DENTAL UNDERGRADUATE INTERNS IN TELANGANA STATE: QUALITATIVE EXPLORATORY STUDY.

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Abstract:

Introduction: Medical emergencies are common in dentistry practice. The dentist is ultimately responsible for managing an emergency scenario in the dental clinic. A lack of training and incapacity to deal with medical crises can have disastrous results, as well as legal action. Hence the study is aimed to assess the dental graduates (Interns) knowledge, skills and competency regarding dentistry-medical emergency interface.

Methodology: Data were collected from 600 Interns from Telangana state using a structured questionnaire consisting of 10 questions.

Results: Syncope was seen by 60.5% of the respondents, The frequencies of the emergencies encountered were once or even more. The presence of medications and equipment in the emergency drug kit was unknown, and confidence concerning their usage was poor. 35.8% of respondents had medical emergency training, although to varied degrees. The majority of responders expressed a need for further medical emergency training.

Conclusion: According to the study, syncope is the most prevalent medical emergency event. Dental graduates have a rudimentary understanding of medical situations, medications, and equipment. More medical emergency training is needed to strengthen the knowledge and confidence of dental graduates (interns) in the handling of medical crises.

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Introduction:

Life threatening emergencies can occur in dental practice. They can happen to anyone. Many factors can lead to emergencies which include Fear & anxiety, increasing age of the patient, status of health. Dental emergency is defined as potentially life threatening condition & requires immediate treatment to stop ongoing tissue bleeding, alleviate severe pain /infection Various emergency conditions in dental practice can occurs include Syncope, Hyperventilation, Anaphylaxis, Asthma, Epilepsy, Hypoglycemia, Myocardial infarction, Cardiac arrest. In such cases prompt and appropriate administration of emergency drugs can save the patient's life. Emergency drugs awareness is an essential aspect of dental practice. As a dental professional, it is crucial to have knowledge and training in emergency management to handle any medical emergencies that may arise during dental procedures. Therefore dental professionals should be aware of types of emergency, drugs used, their indications, contraindications, dosage and administration routes. The most commonly used emergency drugs in dental practice include epinephrine, nitroglycerin, oxygen, benzodiazepines and glucagon. [1,2]

Despite the fact that a number of studies have been conducted to determine the emergency medications and equipments, a lack of training and an incapacity to deal with medical crises can result in catastrophic results and, in some cases, legal action. The most crucial role of dentists is to give basic life support (BLS) until definitive care for a medical emergency can be offered [3,4] The purpose of this study is to assess participants' knowledge of various medical situations and its management as well as their readiness to participate in a Basic Life Support renewal programme.

Methodology:

After obtaining the institutional ethical clearance, the present cross-sectional study was planned in 600 subjects. The sample size was estimated using the convenience sampling technique, Dental Students from various colleges in Telangana state were considered for the study.

With the help of existing literature, a self designed, structured questionnaire form was developed. To check the validity and comprehension of each questionnaire of the study a pilot study was done on 30 subjects. The mode of data collection was an online questionnaire using Google forms. Survey has 2 parts in which first part included Demographic data, 2nd part included 10 multiple choice questionnaire the awareness of various medical emergencies in their practice. The questionnaire included objective questions with yes/no reply. Incompletely filled questionnaires were excluded from the study. The collected data were tabulated and statistically analyzed.

Results:

The obtained results were analyzed and interpreted in percentages. A 600 under graduate students participated in the study among them 88.8% were females, 14.2% were males.

99.4% of the dentist agreed that Knowledge and awareness about medical conditions of the patient before commencing any dental treatment is necessary. 60.5% of the study population agreed Syncope is the most common emergency condition in dental practice. 96% of the students think dental fear and anxiety can lead to an emergency situation. Handling the emergency at dental office is one of the imperative factors in saving the patient life. In the present study only 35.8% are trained in Basic Life Support and 100% of the study population agree that need for hands on work shop & renewal program in regular intervals.

Questionnaire and summary of the data obtained from participants

S.no	Question	YES	NO
1.	Do you enquire about medical conditions of the patient Before commencing any dental treatment?	99.4%	0.6%
2.	Before commencing any dental treatment do you enquire about any medication that the patient is taking	98.9%	1.1%
3.	Before commencing any dental treatment do you record vital signs of the patient	79%	21%
4.	Are you aware of the various medical emergencies in dental practice	95.5%	4.5%
5.	Do you think dental fear and anxiety can lead to an emergency situation	96%	4%
6.	According to you which is the most common emergency condition in dental practice	Syncope-60.5%	
7.	Are you trained in Basic Life Support?	35.8%	64.2%
8.	Do you think it is necessary to attend Basic Life Support renewal program in regular intervals?	100%	0%
9.	Do You think the Drug dose calculation is important?	99.8%	0.2%
10.	Please select correct set of emergency drugs	89.8	
	a) Adrenaline, Glyceryltrinitrate, diazepam, diphenhydramine Hydrocortisone, salbutamol, midazolam, oralglucose	9.1	
	b) Amoxicillin, adrenaline, lidocaine, phenobarbitone, glimepride	1.1	
	c) Diazepam, acarbose, rivastigmine, metformin cetrizine, Adrenaline, cyclophosphamide		

Discussion:

Fortunately, significant medical crises in dentistry practise are uncommon, but when they do occur, they are all the more frightening [5,6]. A comprehensive patient history might alert the practitioner to any potential medical emergencies [7,8].

Dental fear and anxiety can lead to an emergency scenario. An emergency is a circumstance in which a patient requires medical assistance during a specified treatment regimen. Early detection of such an emergency minimizes the risk of morbidity. Medical crises are prevalent in dentistry practice, and when they occur during a procedure, they can be life-threatening. The primary goal of this study is to learn about dentistry Interns' understanding of emergency circumstances in dentistry practice and the medications used to treat them; as future doctors, they should be aware of emergency situations.

A study by shwetakumaraswami evaluation of preparedness for medical emergencies at dental offices showed 98% of the dentists enquire about medical condition before the treatment. Enquiring about the medication that the patient uses will help the dentist to prescribe further medication; as they may produce any adverse effects. 79% of 600 participants recorded vital signs of the patient. According to shwetakumaraswami around 98.4% recorded vital signs. The variation in these results may be due to unavailability of material. Recording vital signs indicates changes in blood pressure, pulse rate, Respiratory rate, Temperature and the consequences such as increase in oral temperature indicates any infection [9].

95.5% of the interns are aware of the various medical emergencies in dental practice. 96% think dental fear and anxiety can lead to an emergency situation. In the present study most commonly encountered emergency seen by interns is syncope followed by hypertension. According to a survey conducted by atherton et al, 82% responded the commonest event is fainting/syncope. [10]. 64.2% of interns are trained in Basic life support, where as 100% are aware of renewal of basic life support in regular intervals. According to the study conducted by Praveen 60% of interns received basic life support training [11]. The reason for difference in this frequency can be explained due to increased interest among students with the developing technology .99.4% responded that drug dose calculation is important. We have inquired about is drug dose calculation is important and asked to pick correct set of emergency drug.

Conclusion:

Medical crises may be frightening for any health professionals but they can be made less frightening if sufficient preparations are done. The best way to handle an emergency is to be prepared in advance. Dentists, being members of the healthcare profession, should be prepared to deal with medical emergencies which may arise at their workplace. But the results of our study reflect an alarming situation about the capability of dentists to deal with such conditions. Attending continuing dental education programs consisting of workshops and hands-on courses in this field should be made mandatory.

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