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RESEARCH ARTICLE

EVALUATION OF PREPAREDNESS FOR MEDICAL EMERGENCIES AT DENTAL OFFICES IN CHENNAI – A cross-sectional study.

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Abstract

Background: Medical emergencies in dental offices poses a serious threat to the patient. Under these conditions it is paramount for the practising dentists to possess adequate knowledge regarding the diagnosis and management of the condition.

Aim: To evaluate the preparedness for medical emergencies at dental offices in chennai.

Objective: This study is done to assess the availability of the medical drugs and knowledge of medical emergencies among the dentists to handle a medical emergency .

Materials And Methods: A simple random sampling involving 150 dental graduates in chennai will be done. Self administered questionnaires will be issued to them and the data will be extracted using the SPSS software.

Result: It was found that about 99% enquired about the medical history of the patients, 34% conducted the required tests for vital signs assessment , 15% attended seminars and workshops , 65% could manage a medical emergency, 30% had adequate drugs and medicines , 30% could administer an intramuscular injection and 5% could administer and intravenous injection.

Conclusion: The results of this study show that the knowledge and attitude of dentists on medical emergencies in chennai is less .

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Introduction:-

The quality of medical service plays an important role in improving the life expectancy of people by providing better health care. Dentists also play a very important role in this. As per a study which was conducted, half the people treated had a chronic illness. Hence, adequate knowledge on medical emergencies and their management is essential. [1]

At first, medical emergencies may panic the dentists but with sufficient knowledge and precautions, they become less alarming. Such incidents may not occur often, but the dentists should be trained for efficient use of equipments and management of the patient. [2]

The most common medical emergency faced by a dentist is the syncope after the administration of local anaesthesia during tooth extraction and endodontic treatment. According to a study, it was found that 60% of the medical

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emergencies were syncope and the next being hyperventilation at 7%.[3] Preparation, prevention and management are the most important aspects for a dentist during treatments. Alterations on the treatment to be provided can be made when a dentist has a thorough look on the medical reports of the patient in case of any systemic health problems . This can prevent medical emergencies.[4]

Materials and methods:-

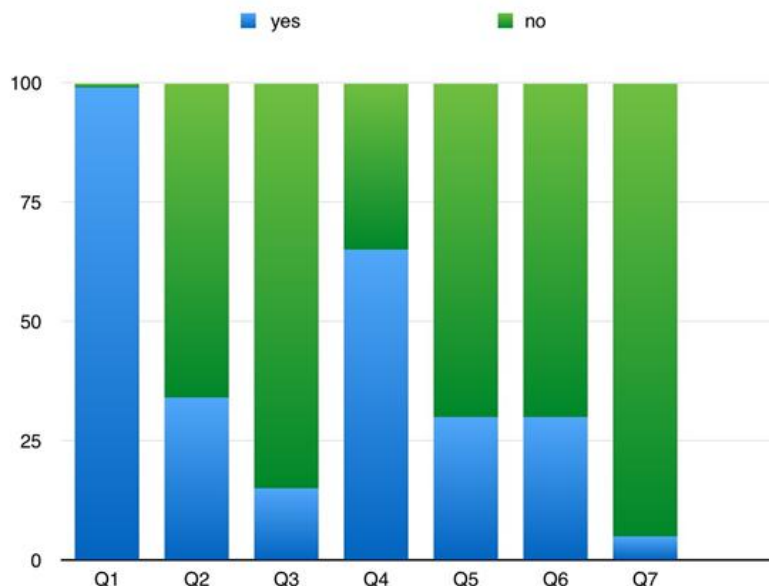
A descriptive cross-sectional study was conducted involving 150 dental graduates in chennai to evaluate the knowledge possessed and the ability to manage a medical emergency at the dental office. It also included the study of the availability of the necessary drugs during a medical emergency at the premises. The self-administered questionnaire consisted mainly of closed ended questions requiring a simple yes or no answer. An informed consent was taken from the participants of the study. The data was later extracted using the SPSS software.

Questionnaire:-

1. Is the medical history of the patient enquired and recorded prior treatment ? Yes/No
2. Do you conduct the required medical tests for vital signs (Blood pressure, pulse,temperature etc) prior to the commencement of the treatment ? Yes/No
3. Have you attended any seminar or workshop on the management and treatment of medical emergencies? Yes/ No
4. Can you manage a medical emergency at your dental office ? Yes/No
5. Are there adequate equipments and drugs for medical emergencies? Yes/No
6. Can you administer an intramuscular injection? Yes/No
7. Can you administer an intravenous injection? Yes /No

Results:-

Questions	% of response
Is the medical history of the patient enquired and recorded prior treatment ? Yes / No	Yes-99% No-1%
Do you conduct the required medical tests for vital signs (Blood pressure, pulse,temperature etc) prior to the commencement of the treatment ? Yes/No	Yes-34% No- 66%
Have you attended any seminar or workshop on the management and treatment of medical emergencies? Yes/ No	Yes-15% No- 85%
Can you manage a medical emergency at your dental office ? Yes/ No	Yes-65% No-35%
Are there adequate equipments and drugs for medical emergencies? Yes/ No	Yes- 30% No- 70%
Can you administer an intramuscular injection? Yes / No	Yes-30% No- 70%
Can you administer an intravenous injection? Yes / No	Yes- 5% No- 95%



Response

Graph 1:- Responses from the participants

It was found that almost all the dentists enquired about the medical history of the patient and had a record of it . When it comes to checking for the vital signs , only about a little more than one fourth did it. Most of the dentists believe in what the patients tell them regarding this. Only about 6% of the dentists had attended the workshops that were held on medical emergencies . About 95% of the dentists in the survey, were confident that they could manage a medical emergency if occurred at their dental office but only 30% had the necessary equipments . Administration of intramuscular injection could be done only by 30% and a very meagre number of dentists of about 5% could administer an intravenous injection.

Discussion:-

At a dental office, the probability for the occurrence of a medical emergency is pretty less, but when there is an emergency , it could be nearly fatal also. Dentists should have the adequate knowledge to identify the patients who might be at risk to avoid a medical emergency situation. Dentists should be aware of the fact of that even during a dental treatment they might encounter a medical emergency if measures aren't taken at prior. [5]

The goal of the study was to evaluate the number of people who take measures such as recoding the medical history of the patient and checking for the vital signs in the patient to prevent medical emergencies during a dental treatment . This study showed that almost all the dentists enquired about the medical history of the patient and many of them also had it maintained as a record. The percentage of dentists who checked for the vital signs such as blood pressure, blood glucose temperature etc were quite less which accounted to only about 34% . Assessment of these vital signs is of utmost importance as they provide an indication such as during an infection, there might be an increase in the body temperature and also an increase in the oral temperature might be due to bacterial or viral infection. Hence, it is necessary to record them for the prevention of medical emergencies at the dental offices. [6] It is important that the medical signs be checked once at the dental office prior treatment and recorded and also updated on subsequent appointments .The patient's physician should be consulted in case the patient has medical complexities. Blood glucose level should be recorded in patients with diabetes. [1]

In a study conducted by sweta kumarasami et al., it was found that only 7.6% of the dentists had attended a workshop on handling medical emergencies but in our study it was almost double the population who had. In a study by Gupta et al., it was found that about 42.1% had attended. [7,8] The number of people who could handle a medical emergency in the present were more than half the population surveyed which accounted to about 65% which was comparatively lesser compared to the study by sweta kumarasami et al., which was about 85%. The others who

couldn't handle the situation call for emergency as they lack hands on experience but have adequate theoretical knowledge. [8]

The necessary equipments and drugs were available only at few dental offices , about 30%.

Most of the dental offices didn't have the proper aids which may be due to carelessness and ignorance about medical emergencies. In a study conducted by Gbotolorun et al., in Lagos also stated that the availability of medical emergency kits in dental offices was only in about 91.1% . [9] In the present study, the percentage of people who had attended a seminar or a workshop was only about 15% . Although , in a study conducted by Muller et al., it started that about 92% took part in a training programme for medical emergencies . [10]

Regarding the drugs available at the dental office for medical emergencies in a study by Gupta et al., showed that oral glucose was the medicament which was most frequently used followed by adrenaline. Diazepam and glyceryl trinitrate was available in less than 25% of the people surveyed.[7]

The basic life support among medical ,dental , nursing students and doctors were concluded to be very poor and had to be improved in a study conducted by Chandrasekaran et al., [11]

The knowledge on medical emergencies among dentists should be enhanced so that the dental office becomes a safer place for treatments . [12] Apart from the knowledge being gained, it is also important to know about the accepted and legalised treatments in the county. [13]

Although there is adequate theoretical knowledge among dentists, there isn't enough practise for them to handle a medical emergency which is the cause of lack of confidence among them. It's the duty of the dentist to manage a medical emergency at his office.

Conclusion:-

From this study it can be concluded that the preparedness for medical emergencies in dental offices has been poor . Measures should be taken to improve the knowledge and attitude on medical emergencies. Dentists , being health care providers should take care of the necessary precautions to prevent emergencies.

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