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Original ARTICLE

Knowledge and attitude of dental professionals about preparedness of medical emergencies

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ABSTRACT

Background: Medical emergencies can happen at any time and to anyone in the dental office. The present study was conducted knowledge and attitude of dental professionals about preparedness of medical emergencies. **Materials & Methods:** The present study was conducted on 285 dental professional of both genders. All were provided with the questions which were regarding the gender, years of experience, validity of BLS, availability of emergency drugs and equipment, type and frequency of medical emergencies in their practice, knowledge about emergency drugs and precautions to be taken to avoid medical emergencies. **Results:** Out of 285 subjects, males were 130 and females were 155. Common medical emergencies encountered were hypoglycemia by 45%, hypotension in 58%, vasovagal syncope in 28%, anaphylactic shock in 30%, seizures by 7% and bleeding by 48%. The difference was significant ($p < 0.05$). 45% had knowledge of BLS, 60% had done BLS, 62% had attended workshop on BLS and 68% had knowledge about chest compression. The difference between corrected and incorreced was non- significant ($P > 0.05$). 65% enquire about medical history including medication, 70% obtain the vital signs, 68% can give intramuscular injection and 69% can give an intravenous injection. The difference was non- significant ($P > 0.05$). **Conclusion:** Dental professionals had sufficient knowledge and attitude about about preparedness of medical emergencies.

Key words: Dental professionals, knowledge, Medical emergencies

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INTRODUCTION

Medical emergencies can happen at any time and to anyone in the dental office due to the increased possibility of stress often associated with dental treatment.¹ Fortunately, the serious complications that may arise in dental clinics are rare. The most commonly seen medical emergencies in the dental office are syncope, hypoglycaemia and hyperventilation. Effective management of the adverse effects of medical emergencies necessitates that all dental students and staff who are dealing with patients are well prepared to manage medical emergency.² Every patient expects His/her dentist to be familiar with emergency interventions which include basic life support, advanced life support and specific drugs to be administered in emergencies. There is a significant need for increased awareness among dental professionals about emergency medicine.³ Some medical emergency can be immediately triggered by dental therapy especially in long standing procedures.⁴ As an example,

emergencies can occur during or after given the local anesthesia or even as an allergic response to some materials used in dentistry (resins, latex). Every dental professional should be trained in emergencies which maybe life threatening and should be able to deal with anywhere and any situation. Dental professionals should be aware of protocols for initial stabilization of the patient in the dental office. Emergency can occur in any dental office without any warnings.⁵ The present study was conducted knowledge and attitude of dental professionals about preparedness of medical emergencies.

MATERIALS & METHODS

The present study comprised of 285 dental professional of both genders. The study was approved from institutional ethical committee. All participants were informed regarding the study and written consent was obtained.

Information such as name, age, gender etc. was recorded.

All were provided with the questions which were regarding the gender, years of experience, validity of BLS, availability of emergency drugs and equipment, type and frequency of medical emergencies in their practice, knowledge about emergency drugs and precautions to be taken to avoid medical emergencies. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of subjects

Gender	Males	Females
Number	130	155

Table I shows that out of 285 subjects, males were 130 and females were 155.

Table II Different medical emergencies encountered by subjects

Medical emergencies	Percentage	P value
Hypoglycemia	45%	0.05
Hypotension	58%	
Vasovagal syncope	28%	
Anaphylactic shock	30%	
Seizures	7%	
Bleeding	48%	

Graph I: Percentage

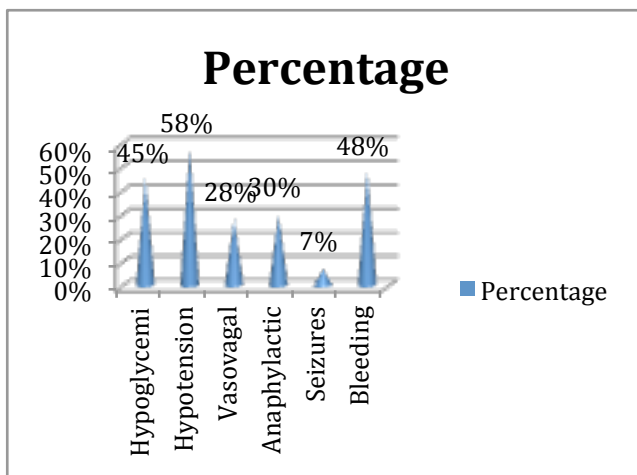


Table II shows that common medical emergencies encountered were hypoglycemia by 45%, hypotension in 58%, vasovagal syncope in 28%, anaphylactic shock in 30%, seizures by 7% and bleeding by 48%. The difference was significant (p< 0.05)

Table III Comparison of knowledge among subjects

Questions	Corrected	Incorrected	P value
What is the abbreviation of BLS?	45%	55%	0.46
Have you ever done/seen BLS (CPR) on a patient?	60%	40%	0.52
Have you ever attended a workshop on BLS?	62%	38%	0.78
Rate of chest compression in adult and children	68%	32%	0.82

Table III shows that 45% had knowledge of BLS, 60% had done BLS, 62% had attended workshop on BLS and 68% had knowledge about chest compression. The difference between corrected and incorrected was non- significant (P> 0.05).

Table IV Attitude among subjects

Questions	Yes	No	P value
Do you enquire about medical history including medication	65%	35%	0.72
Do you obtain the vital signs	70%	30%	0.54
Can you give an intramuscular injection?	68%	32%	0.61
Can you give an intravenous injection?	69%	31%	0.45

Table III shows that 65% enquire about medical history including medication, 70% obtain the vital signs, 68% can give intramuscular injection and 69% can give an intravenous injection. The difference was non- significant (P> 0.05).

DISCUSSION

Nowadays a large number of population from young to elderly are subjected to dental treatment. As the quality of health care is improving and life expectancy is increasing, dentists are required to treat a growing number of elderly and medically compromised patients.⁶ Studies have shown that half of all patients treated in dental school have at least one chronic disease or condition. Since some diseases and their treatments increase the likelihood of a medical emergency during dental care, dentists must be prepared to manage a variety of medical emergencies, such situations are more likely to occur within the confines of the dental office due to the increased level of stress which is so often present.^{7,8} The present study was conducted knowledge and attitude of dental professionals about preparedness of medical emergencies. In this study, out of 285 subjects, males were 130 and females were 155. Kumarswami et al⁹ who concluded that although almost all the dentists take the medical history, only 12% of them obtain filled history proforma from the patients and only one third of them monitor the vital signs of the patients. The authors also reported that less than one third of the participants confirmed the availability of emergency kit which is coincident with our results.

This point in particular raised the importance of providing emergency kit in all dental clinics to be used when needed.

We found that common medical emergencies encountered were hypoglycemia by 45%, hypotension in 58%, vasovagal syncope in 28%, anaphylactic shock in 30%, seizures by 7% and bleeding by 48%. 45% had knowledge of BLS, 60% had done BLS, 62% had attended workshop on BLS and 68% had knowledge about chest compression. The difference between corrected and incorrect was non-significant ($P > 0.05$). Sheikho et al¹⁰ found that from eighty six (86) dentists who answered the questionnaire, 74(86%) were general dentists and 12(14%) were dental specialists, 52(60.4 %) were male and 34(39.6%) were female. The mean age and work experiences in male dentists was significantly more than female ($P < 0.05$), but there is no significant differences in terms of mean patient visits per day, hours of work per day and knowledge scores between male and female. The level of awareness of 39.5% of dentists was good, in 37.2% was average and in 23.3% was poor. The knowledge of dentists about diagnosis and management of dental emergencies was not satisfying. We observed that 65% enquire about medical history including medication, 70% obtain the vital signs, 68% can give intramuscular injection and 69% can give an intravenous injection. Gupta et al¹¹ found that less than half of the participants (47.3%) usually check vital signs before surgical extraction only and 42% before simple and surgical extraction and 8% before simple extraction only. Only 46.4% of the participants have experienced at least one medical emergency throughout their career. The most common medical emergency encountered is vasovagal syncope followed by hypoglycaemia and seizures, respectively. Majority of GPs have valid BLS and no one answered all question correctly.

Sudeep et al¹² found that 112 questionnaires were filled, with a response rate of (55.4%). Most of participants knew the abbreviation of BLS and half of them answered the questions of knowledge correctly. Most of participants thought that all dental students and staff need to know more about BLS. The knowledge of undergraduate students and interns about BLS is inadequate and need to be improved but they have a positive attitude toward it.

CONCLUSION

Dental professionals had sufficient knowledge and attitude about about preparedness of medical emergencies.

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