

Awareness Regarding Heat Exhaustion Among Dental Student's

Nuzhath Begum¹, K. V. N. R. Pratap², T. Madhavi Padma³, V. Shiva Kalyan⁴, P. Srikanth⁵

¹Student (BDS), Department of Public Health Dentistry, Mamata Dental College, Khammam, India

²Professor & HoD, Department of Public Health Dentistry, Mamata Dental College, Khammam, India

³Professor, Department of Public Health Dentistry, Mamata Dental College, Khammam, India

⁴Reader, Department of Public Health Dentistry, Mamata Dental College, Khammam, India

⁵Lecturer, Department of Public Health Dentistry, Mamata Dental College, Khammam, India

Abstract: Extreme variation in temperature (i.e. increased heat) has led to large number of deaths. Our study based on evaluating the awareness Among Dental Student's regarding heat exhaustion an initial condition due to increased environmental temperature which if not controlled progresses to heat stroke and further complications. It is a descriptive cross sectional survey based study consisting of 300 members. They were questioned about heat stroke and exhaustion, symptoms and treatment. From our study we come to know that they are aware about heat exhaustion although there is slight confusion in symptoms but they are aware about treatment of heat exhaustion.

Keywords: Heat Exhaustion

1. Introduction

India is home to an extraordinary variety of climatic region. Ranging from tropical in the south to temperature and Alpine in the Himalayan north, where elevated regions receive sustained winter snowfall. In certain areas like Telangana is a semi-arid area and has a predominantly hot and dry climate. Summers start in March, and peak in May with average high temperature in the 42°C range.

Extreme heat is an important weather hazard associated with excess mortality and morbidity found in cities. The intense summer heat waves of the past few years increased which lead to increased risk of death. Heat related illnesses are a spectrum of conditions ranging from Minor to life threatening emergency. Extreme environmental heat can trigger the onset of acute conditions, like heat stroke and dehydration. Heat exhaustion is a mild to moderate illness. Heat stroke a severe illness characterized by a core body temperature above 40°C.

Heat exhaustion is when the temperature inside the body known as the core temperature rise to 37-40°C. At this temperature the levels of water and salt in the body begin to drop. Symptoms of heat exhaustion include intense discomfort, nausea, thirst and vomiting. Absence of neurologic symptoms differentiate heat exhaustion from heat stroke. Even though it is not considered a major health concern but if it is left untreated can lead to heat stroke and further complications.

Awareness regarding heat exhaustion should be done. And

also can be prevented by wearing light weight, light colored, loose fitting clothing and drinking extra fluids. These precautions are necessary for everyone to overcome the future complications. So the present study is to assess the awareness regarding heat exhaustion Among Dental Student's.

2. Methodology

A cross-sectional survey was designed among 300 students of Mamata educational institution, Khammam, Telangana from 20-may-2019 to 28-may-2019. A structured, self-administered questionnaire was used for data collection. The questionnaire was explained and formed consent were taken prior to the study from study subjects. Total number of students present during the survey conducted were 300 students which includes both male and female of ages between 21 to 25 years. Permission was taken from the head of the department of public health dentistry. All students of Mamata educational institution were present during the day of survey and not willing to participate were excluded.

A. Demographic questionnaire

The back ground questionnaire included questions on arrange of demographic variables such as age, gender and course of study. A 16 item questionnaire measuring knowledge and awareness towards heat exhaustion. The questionnaire under the title awareness regarding heat exhaustion Among Dental Student's.

B. Statistical analysis

Statistical analysis was done by using SPSS25 version. Descriptive statistics was performed, chi-square test was used to find the association among categorical variables.

3. Results

This study was conducted among 200 PGs, interns, and final years out of which 72% are females and 28% are males.

Demographic data of study participants

Variables

Gender	Frequency	Percent
Female	144	72
Male	56	28

Year of study	Frequency	Percent
Interns	68	34
PG	64	32
Final years	68	34
Total	200	100

	Frequency	Percent
Yes	72	36
No	128	64
Total	200	100

	Frequency	Percent
Yes	112	56
No	88	40
Total	200	100

	Frequency	Percent
Cardiac problems	20	10
Hypertension	28	14
Diabetes	16	8
All the above	136	68
Total	200	100

	Frequency	Percent
Yes	160	80
No	40	20
Total	200	100

Based on the results obtained after analyzing each question separately majority of students which is 128(68%) think that heat exhaustion and heat stroke not same, least number of students which is 72(36%) think that heat exhaustion and heat stroke are same.

Most number of students which is 112(56%) are affected by heat exhaustion, least number of students which is 88(44%) not affected by heat exhaustion.

Majority of students which is 136(68%) think that systemic conditions increase heat exhaustion, least number of students which is 16(8%) think that systemic conditions are not increase heat exhaustion.

Most number of students which is 160(80%) think that heat exhaustion lead to heat stroke, least number of students which

is 40(20%) think that heat exhaustion not lead to heat stroke.

4. Discussion

My study includes awareness regarding heat exhaustion Among Dental Student's.

Heat from high environmental temperature is a natural hazard that can adversely affect human health. Heat exhaustion and heat stroke are part of heat related illness. Heat exhaustion, a mild to moderate illness can proceed to heat stroke. i.e. a life threatening illness characterized by a core body temperature above 40°C. According to my study most of the students know about the heat exhaustion and heat stroke.

According to my study 68% of the students know that the heat exhaustion and heat stroke are not same. 56% of the students are effected by heat exhaustion. And 68% of students think that the systemic conditions increase the heat exhaustion. And 80% of students known that the heat exhaustion lead to heat stroke. According to Glen p. Kenny PhD et al study in which people with age over 60years, obesity, hypertension, pulmonary or cardiovascular diseases or long standing diabetes are at increased risk of heat related illness [1]. According to Daniel oudin astrom et. al. study in which studies report a strong relationship between heat and heat waves and increasing death rates among the elder, particularly for respiratory and cardiovascular mortality [2].

5. Conclusion

The survey has showed that the majority of the dental students are aware about heat exhaustion and heat stroke. And they are also aware of it's symptoms and treatment, And also it's preventive measurements.

References

- [1] Kenny GP, Yardley J, Brown C, Sigal RJ, Jay O: heat stress in older individual and patients with common chronic diseases. Can Med Assoc J., 2010; 1053-1060
- [2] Daniel oudin astrom, Bertil Forsberg, Joacim Rocklov: heat wave impact on morbidity and mortality in the elderly population.
- [3] Joseph A. Grubenhoff, MD, Kelley du Ford, MD, Genie E. Roosevelt, Heat related illness.
- [4] Yasufumi MIYAKE: Pathophysiology of heat illness: thermoregulation, risk factors, and indicators aggravation: JMAJ 56(3): 167-173, 2013.