



STUDY OF AWARENESS OF HEAT RELATED ILLNESS IN PARAMEDICAL STAFF

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ABSTRACT

Introduction: extreme heat is an important weather hazard associated with excess mortality and morbidity found in cities worldwide. Ahmedabad city faced major casualty in summer months in 2010 due to high heat wave. This evoked urge of setting Heat Action Plan in 2013. One of the main strategies is capacity building in health care professionals- medical & paramedical staff. Purpose of the study was to evaluate awareness regarding heat related illnesses in nursing students. **Methodology:** The cross sectional questionnaire based study was conducted in July 2018 at L. G. Hospital by interviewing nursing students with preformed validated questionnaire. All the data was analysed and tabulated by proper statistical methods. **Result:** Total 130 nursing students were selected as sample. Out of which 63% students have awareness regarding heat wave. There is lack of knowledge regarding symptoms and primary treatment of heat related illness. **Conclusion:** This study supported the need for increased public education and awareness activity as a critical measure to tackle the impact of heat related illness. Cost of setting up a heat preparedness plan is cheaper than the cost of lives.

KEYWORDS : Heat related illness, nursing student, awareness, morbidity.

INTRODUCTION

May 2010, Ahmedabad, 1300+ deaths, cause of death--Heat Related illness. [1]. This was an eye opening disaster for India. Government needed to take firm steps to reduce the deaths due to heat hazards. Each year, millions of people are exposed to the dangers of extreme heat. This is the major public concern for cities now and looking toward the future because the interactions of global climate change, air pollution are predicted to place increasing health burdens on cities. [2]

Heat related illness is spectrum of symptoms ranging from minor to life threatening which are heat cramps, heat exhaustion, heat stroke. Heat cramps are painful, brief muscle cramps that occur during work in hot environment. Heat exhaustion usually occurs after strenuous exercise, excessive sweating, exposure to high environmental temperatures, poor fluid intake, chronic volume depletion and failure to acclimatize with surrounding temperature. In heat exhaustion, core body temperature is between 100.4 °F(38°C) and 104°F(40°C). [3] Human thermal maximum has core body temperature of 42°C(107.6°F) upto 8 hours. Thermal maximum is defined as magnitude and duration of heat that cells can stand before becoming damaged. [4]

Heat exhaustion is a condition in which there is intense discomfort due to heat, thirst, nausea and vomiting. There is absence of neurological symptoms which differentiates it from heat stroke. [5]

Heat stroke is a condition in which there is hyperthermia to such extent that body tissue dysfunctions and there is multi organ clinical and pathological syndrome. The diagnosis is based on two critical factors; hyperthermia and central nervous dysfunction. It is a medical emergency which can be fatal and mortality can reach up to 10%. [6]

Rapid diagnoses and effective cooling of body are crucial part of treatment of heat stroke because delay may cause series of metabolic events that may progress to irreversible end organ damage and death. [7] Patient of Heat exhaustion get symptomatic relief promptly with hydration and cooling this also prevents progression towards heat stroke. [7]

Morbidity and mortality due to heat related illness is burden to the health care system as it is totally preventable by simple measures. Ahmedabad heat action plan 2013 was result of large of deaths and hospital admissions due to extreme heat wave of summer months in 2010. As a part of this plan capacity building of health care system and educating and training of health care personnel was given a prime importance. [1] Paramedical staff is the one who comes in first contact of patients and it is mandatory for them to know and screen patients suffering from heat related illness.

The Purpose of this study was to evaluate awareness in nursing students regarding heat related illness, primary treatment of heat related illness what preventive measures should be adopted to reduce heat related illnesses. This data can be helpful in future policy-making and its implementation.

METHODOLOGY

The cross sectional questionnaire based study was conducted in July 2018 at L. G. Hospital by interviewing nursing students. The questionnaire was prepared by department of pediatrics which includes set of 10 questions. The questionnaire was validated by standard procedure to evaluate the knowledge of heat related illness amongst the paramedical staff Questionnaire included set of 10 questions to gather range of information which includes:

- Whether they knew about heat wave and vulnerable age group.
- Main symptoms of heat related illness in adults and young infants.
- Primary treatment of heat related illness.
- Prevention of heat hazards.

Total 130 GNM students were included in the study and verbal consent were taken from all the students for the study. There was no rejection from the students for the study.

Informed consent and approval of ethical committee was taken to conduct the study.

All the data was analyzed and tabulated by proper statistical methods.

RESULT

Total 130 GNM nursing students were selected as sample.

Out of which 63% students have awareness about heat wave. Most of the students (98%) were aware about timing of heat wave.

More than 70% nursing students have some knowledge of various symptoms of heat related illness. But only few have knowledge regarding symptoms of severe heat related illness i.e. Convulsion, breathlessness and muscle cramps.

71% students have knowledge regarding primary treatment as tepid sponging and 64% have knowledge of hydration.

64% students have misconception regarding use of anti pyretics as primary treatment.

89% students have knowledge of hydration as preventive measure of heat related illness.

55% students were aware of clothing and 54% students were favour of cool environment.

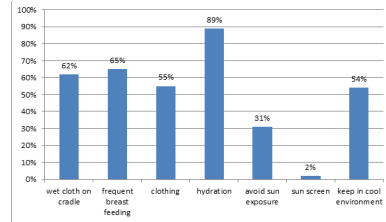
This data suggests that there is lack of knowledge regarding symptoms and primary treatment of heat related illness.

CONCLUSION

Whilst ~64% were aware of the term "heat wave", there is a need for increase awareness in paramedical staff for better medical service as they are the backbone of medical services.

This study supported the need for increased public education and awareness activities as a critical measure to tackle the impact of heat related illness.

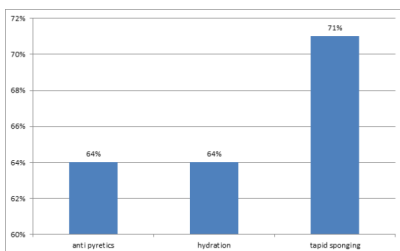
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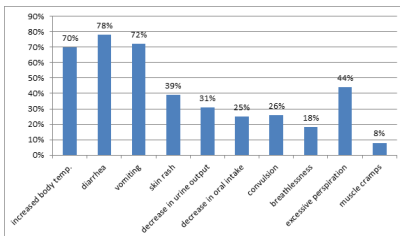
AWARENESS REGARDING PREVENTION OF HEAT RELATED ILLNESS

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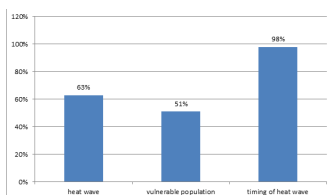
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AWARENESS REGARDING TREATMENT OF HEAT RELATED ILLNESS



AWARENESS REGARDING SYMPTOMS OF HEAT RELATED ILLNESS



AWARENESS REGARDING KNOWLEDGE OF HEAT WAVE