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Awareness about Acute Coronary Syndrome among Allied Health Students

Hariprasath TK[1], Nivetha Raja[2], Suguna Perumalsamy[3], D. Jagadeeswaran[4], Dhanraj Ganapathy[5*]

[1]Undergraduate student, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, India, 1518010101.sdc@saveetha.com
[2]Bsc Allied Health Sciences II year, Department of Cardiovascular Perfusion Technology, Saveetha College of Allied Health Sciences, India, nivethascahsregno4019@gmail.com
[3]Lecturer, Department of Cardiovascular Perfusion Technology, Saveetha College of Allied Health Sciences, Saveetha Institute of Medical and Technical Sciences, Chennai - India.
[4]Principal & Professor, Saveetha College of Allied Health Sciences, Saveetha Institute of Medical and Technical Sciences, Chennai - India.
[5]Professor & HOD, Department of Prosthodontics, Saveetha Dental College & Hospital, Saveetha Institute of Medical and Technical Sciences, Chennai – India, dhanraj@saveetha.com

Introduction: Acute coronary syndrome (ACS) refers to a group of conditions that include ST-elevation myocardial infarction (STEMI), non-ST elevation myocardial infarction (NSTEMI), and unstable angina. It is a type of coronary heart disease (CHD), which is responsible for one-third of total deaths in people older than 35. Some forms of CHD can be asymptomatic, but ACS is always symptomatic. Aim: To assess the knowledge level and create awareness about acute coronary syndromeallied health science students. Materials And Methods: This cross-sectional research was conducted with a self-administered questionnaire containing ten questions distributed amongst 100 Allied Health science students. The questionnaire assessed the awareness of acute coronary syndrome, it's clinical manifestation, complications, treatment and prevention, and diagnostic tools among allied health science students. The responses were recorded and analysed. Result: Among 100 Allied health science students, 83%of the students are aware about acute coronary syndrome.78% of students know about the etiology of acute coronary syndrome.73% of students know about the major complications of acute coronary syndrome. 75% of students know about how acute coronary syndrome leads to death. 72%of students know about preventive measures and treatment of acute coronary syndrome. Conclusion: There is adequate awareness amongst AHS students about acute coronary syndrome. However, enhanced awareness initiatives and educational programmes together with increased importance for curriculum improvements that further promote knowledge and awareness of acute coronary syndrome should be initiated for further understanding and benefits.

Keywords: Awareness, acute coronary syndrome, myocardial disease, students, Medicinal.

1. Introduction

Acute coronary syndrome (ACS) refers to a group of conditions that include ST-elevation myocardial infarction (STEMI), non-ST elevation myocardial infarction (NSTEMI), and unstable angina. It is a type of coronary heart disease (CHD), which is responsible for one-third of total deaths in people older than 35. Some forms of CHD can be asymptomatic, but ACS is always symptomatic.[1-3]

ACS is a manifestation of CHD (coronary heart disease) and usually a result of plaque disruption in coronary arteries (atherosclerosis). The common risk factors for the disease are smoking, hypertension, diabetes, hyperlipidemia, male sex, physical inactivity, family obesity, and poor nutritional practices. Cocaine abuse can also lead to vasospasm. [4-6]

The classic symptom of ACS is substernal chest pain, often described as crushing or pressure-like feeling, radiating to the jaw and/or left arm. This classic presentation is not always seen, and the presenting complaint can be very vague and subtle with chief complaints often being difficulty breathing, lightheadedness, isolated jaw or left arm pain, nausea, epigastric pain, diaphoresis, and weakness. Female gender, patients with diabetes, and older age are all associated with ACS presenting with vague symptoms.

General distress and diaphoresis are often seen. Heart sounds are frequently normal. At times, gallop and murmur can be heard. Lung exam is normal, although at times crackles may be heard pointing toward associated congestive heart failure (CHF). Bilateral leg edema may be present indicating CHF. The rest of the systems are typically within normal limits unless co-pathologies are present. The presence of abdominal tenderness to palpation should make the provider consider other pathologies like pancreatitis and gastritis. The presence of unequal pulses warrants consideration of aortic dissection.

The first step of evaluation is an ECG, which helps differentiate between STEMI and NSTEMI unstable angina. American Heart Association guidelines maintain that any patient with complaints suspicious of ACS should get an ECG within 10 minutes of arrival. Cath lab should be activated as soon as STEMI is confirmed in a percutaneous coronary intervention (PCI) center. Cardiac enzymes, especially troponin, CK-MB/CK ratio is important in assessing the NSTEMI versus myocardial ischemia without tissue destruction. A chest x-ray is useful in diagnosing causes other than MI presenting with chest pain like pneumonia and pneumothorax. The same applies for blood work like complete blood count (CBC), chemistry, liver function test, and lipase which can help differentiate intra abdominal pathology presenting with chest pain. Aortic dissection and pulmonary emboli should be kept in differential and investigated when the situation warrants. [7]-9]

2. Materials and Methods:

This cross-sectional research was conducted with a self-administered questionnaire containing ten questions distributed amongst 100 Allied Health science students.The students were randomly selected across various disciplines of Allied Health Sciences.The study setting was designated in the university campus.The survey instrument was a questionnaire pre tested and evaluated for validity and reliability concerns.

The questionnaire included ten questions eliciting the demographic data through open-ended responses and multiple choice questions for the other responses.The study was approved by the Institutional Ethical Committee and informed consent was obtained from the participants. The questionnaire was posted on an online platform and the identity of the respondents was kept confidential.

The questionnaire assessed the awareness of acute coronary syndrome, it's clinical manifestations, treatment, complications, and diagnostic method. The responses were recorded and analysed.There were no incomplete responses and no dropouts from the study.The final data obtained was organized,tabulated and subjected to statistical analysis.

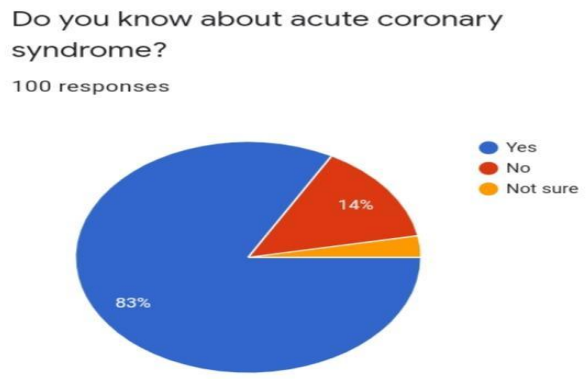
The salient questions in the study are

1. Do you know about acute coronary syndrome?
2. Do you know about the etiology of acute coronary syndrome?
3. Do you know about the major complications of acute coronary syndrome?
4. Do you know how acute coronary syndrome leads to death?
5. Do you know how to prevent and treat acute coronary syndrome?

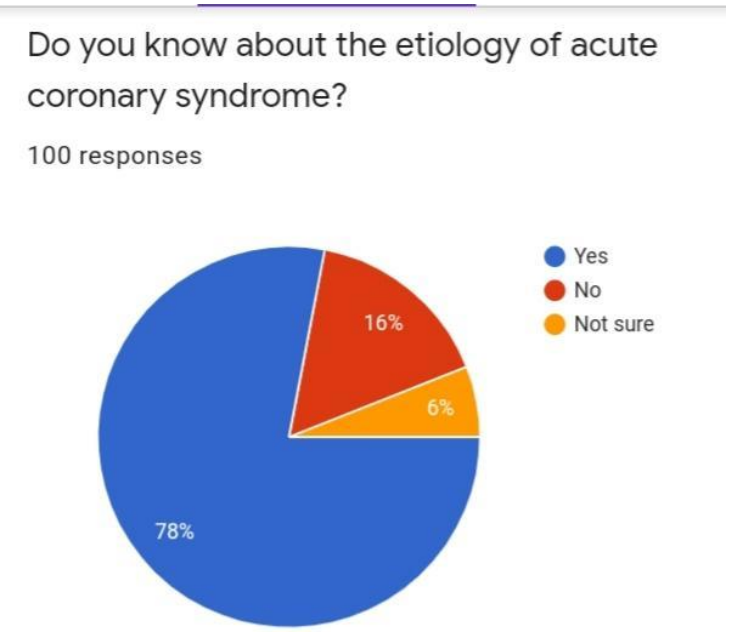
3. Result:

Among 100 Allied health science students, 83%of the students are aware about acute coronary syndrome(Fig.1).78% of students know about the etiology of acute coronary syndrome(Fig.2). 73% of students know about the major complications of acute coronary syndrome(Fig.3). 75% of students know about how acute coronary syndrome leads to death(Fig.4). 72%of students know about preventive measures and treatment of acute coronary syndrome (Fig.5).

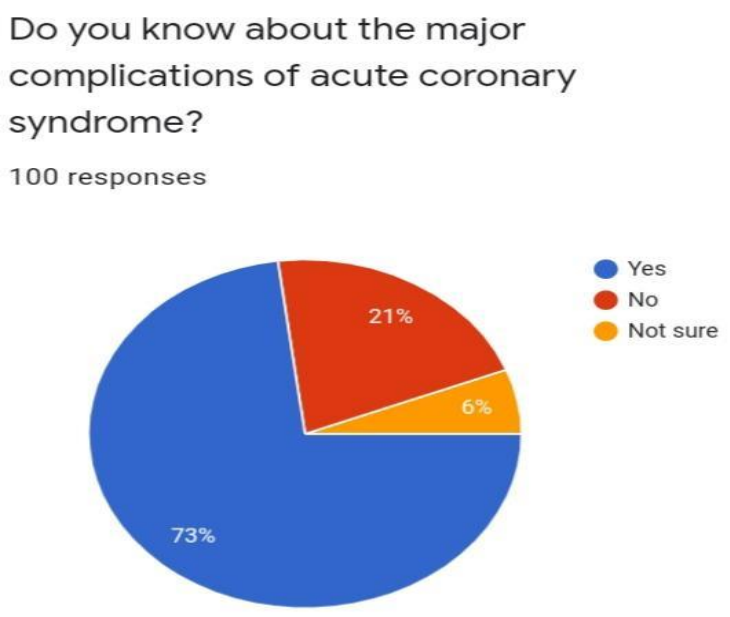
1) Do you know about acute coronary syndrome?



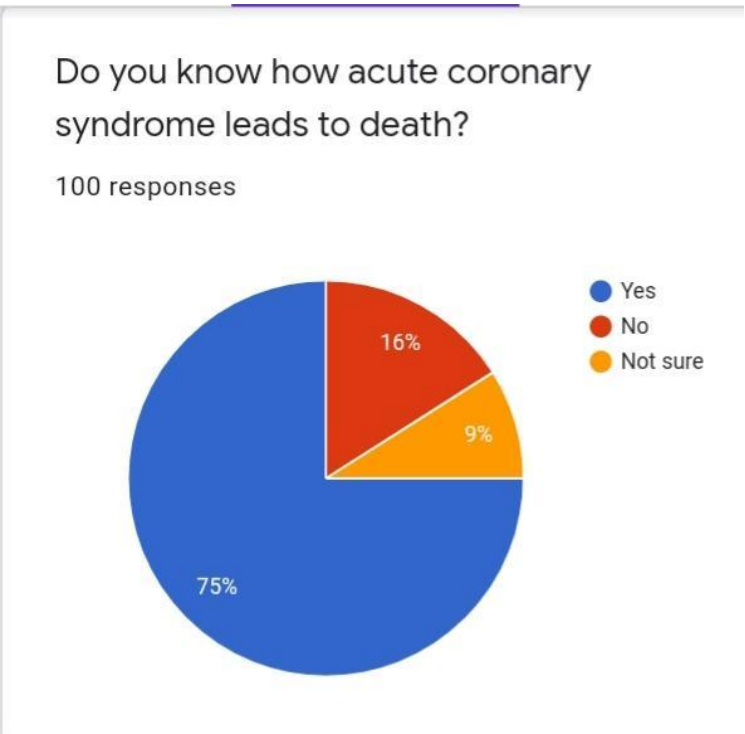
2) Do you know about the etiology of acute coronary syndrome?



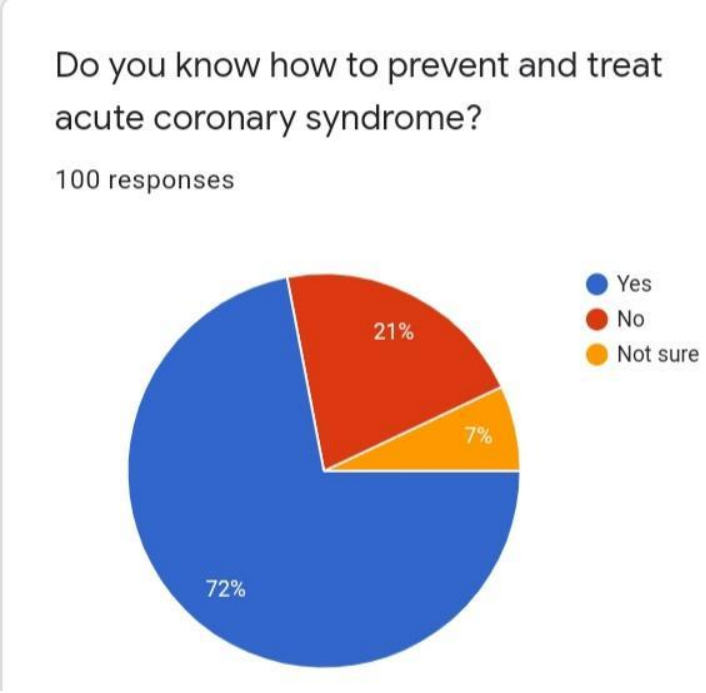
3) Do you know about the major complications of acute coronary syn?



4) Do you know how acute coronary syndrome leads to death?



5) Do you know how to prevent and treat acute coronary syndrome?



4. Discussion:

Acute coronary syndromecan make the heart stiffen, enlarged or thickened and can cause scar tissue. As a result, the heart can't pump blood effectively to the rest of the body. The acute coronary syndrome heart can weaken and acute coronary syndrome can lead to heart failure.[10] 83% of the students were aware about acute coronary syndrome in our study. This shows the curriculum creates adequate awareness about acute coronary syndrome among allied health science students.

The major causes of acute coronary syndrome is blockage of coronary arteries , plaque formation in coronary arteries, coronary vasospasm, coronary artery dissection hypertension. The common risk factors for the disease are smoking, hypertension, diabetes, hyperlipidemia, male sex, physical inactivity, family obesity, and poor nutritional practices. Cocaine abuse can also lead to vasospasm.[11-13] In our study 78% of the students were aware about clinical manifestation of acute coronary syndrome.

Acute coronary syndrome will definitely lead to myocardial ischemia- myocardial infarction then it results in death.This causes low oxygen supply to the heart via low blood supply and makes it die. [14,15]In our study 75% of the students were aware that acute coronary syndrome leads to death.

Acute coronary syndrome can be prevented by less intake cholesterol foods , controlled sugar level , controlled blood pressure level. It can be treated by operations such as CABG,PTCA& BALLOON ANGIOPLASTY. In our study 72% of the students were aware to prevent and treat the patients.

5. Conclusion :

There is adequate awareness amongst AHS students about Acute coronary syndrome. However,enhanced awareness initiatives and educational programmes together with increased importance for curriculum improvements that further promote knowledge and awareness of Acute coronary syndrome should be initiated for further understanding and benefits.

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