

Introduction of Basic Life Support in Medical Curriculum - Is this the Need of an Hour?

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ABSTRACT

BACKGROUND

Deaths do occur; but sometimes they can be prevented by adopting simple manoeuvres and skills. BCLS is a key component of chain of survival. The present study highlights the need for a structured training in BCLS and introduction of BCLS in the academic curriculum of undergraduate medical course. We wanted to measure the knowledge levels regarding Circulation Airway Breathing (CAB) Resuscitation in study subjects and assess the awareness of study subjects with regard to BCLS life supports.

METHODS

This is a cross sectional study conducted in Guntur Medical College and Hospital, Guntur, Andhra Pradesh, among 213 final year Part 1 & 2 undergraduate students of medicine using a semi-structured questionnaire which is pre-tested, in the month of January 2019. The data was collected and entered in MS Excel and analysed by Epi Info.

RESULTS

Of the 213 study subjects, 159 (74.6%) were females while 54 (25.3%) were males. Out of the study subjects, 79.8% were aware of Basic Life Support; 77% were having poor theoretical knowledge about Basic Life Support, among them, in 42.3% there was lack of knowledge with regard to BLS due to lack of professional training in their undergraduation. 97.18% think that Basic Life Support training should be a part of academic curriculum in medicine.

CONCLUSIONS

Basic Cardiopulmonary Life Support training is an absolute necessity for the medical students to face acute medical emergencies that they come across, even while pursuing their graduation. This also boosts the confidence of students.

KEY WORDS

Basic Life Support (BLS), Basic Cardiopulmonary Life Support (BCLS), Knowledge, Awareness, Medical Students, CPR (Cardiopulmonary Resuscitation), Circulation Airway Breathing (CAB), AED (Automated External Defibrillator)

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BACKGROUND

Resuscitation "is the art of restoring life or consciousness of one apparently dead."^[1] CPR invented in 1960, is a simple but effective procedure that allows almost anyone to sustain life in early critical minutes after cardiac or respiratory arrest.^[2]

Basic Cardiopulmonary Life Support (BCLS) and Comprehensive Cardiac Life Support (CCLS) are part of CPR.^[3,4] Basic Cardiopulmonary Life Support (BCLS) includes early recognition of sudden cardiac arrest (SCA), acute coronary syndrome, stroke and foreign-body airway obstruction (FBAO), cardiopulmonary resuscitation (CPR), and defibrillation with an automated external defibrillator (AED).^[5]

Deaths do occur; but sometimes it can be prevented by adopting simple manoeuvres and skills as it can prevent grave consequences and can increase the rate of hospital discharge. Every citizen in the community should know about Hands only CPR or Compression only life support as they are the first responders who can save lives and improve the quality of health in the community. Medical fraternity like doctors, nurses, paramedics should know about BCLS as they are the first responders with in the and out of the hospital life threatening conditions and knowledge in BCLS will be great help for them.

Basic Cardiopulmonary Life Support (BCLS) is a key component of chain of survival. The present study highlights the need for a structured training in BCLS and introduction of BCLS in the academic curriculum of medicine.

DRSCABD stands for

- D Dangers?
- R Responsive?
- S Send for help.
- C Start CPR.
- An Open Airway.
- B Normal breathing?
- D Attach Defibrillator.

We wanted to measure the knowledge levels regarding Circulation Airway Breathing (CAB)/Resuscitation in study subjects and to assess the awareness of study subjects in Basic cardiopulmonary Life Support.

METHODS

This is a cross sectional study conducted in Guntur Medical College and Hospital, Guntur, Andhra Pradesh among 213 undergraduate medical students in the month of January 2019 after institutional ethical committee approval. After taking verbal consent, 213 final year part 1 & 2 undergraduate medical students who has given willingness to participate in the study were included. As levels of awareness and knowledge vary after clinical exposure from first year to final year students, final year medical students were included in the study. The data was collected using pre-tested, semi-structured questionnaire and was distributed to the subjects and collected after adequate time.

A question bank comprising of 25 questions about the skills, knowledge, awareness in BCLS was used to assess their

level of knowledge and practicality. They were questioned on their knowledge about BCLS, abbreviations of AED, CPR, BCLS, sequential assessment and resuscitation techniques of BCLS, their ability to recognize early signs of stroke and acute coronary syndrome, removal of foreign body obstruction. After excluding the incomplete response sheets the data was analysed on 213 responders. Permission was taken from the institutional head before involving the students. The results were analysed using an answer, key prepared from the Basic cardiopulmonary life support manual.

Statistical Analysis

Data collected was entered in MS Excel sheet by calculating appropriate proportions by using EPI INFO statistical software package.

RESULTS

Among 213 study subjects, 159(74.6%) were females while 54(25.3%) were males. Out of study subjects, 79.8% were aware of Basic Cardiopulmonary Life Support (BCLS), 20.2% medical students never heard about BCLS. 69% percent has never seen BCLS performed. 94.4% has never done BCLS on patients. 87.3 % has never attended workshop on BCLS. 93.4% do not think that BCLS should be done only in hospital. 82.2 % never called emergency number. 38.8% never heard of Heimlich manoeuvre (Table 1).

Of the 213 study subjects, 48% doesn't know the abbreviation of BCLS as Basic Cardiopulmonary Life Support. 83% failed to insist on scene safety as the first step in BCLS. 79% failed to insist on calling for help and activating the Emergency response system after confirmation of unresponsiveness of the victim. 84% did not know the exact location of placement of their hands to do chest compressions which is two fingers above the xiphisternum. 83% doesn't know that ventilation can be given with face mask, face shield and bag mask other than mouth to mouth ventilation. 33% gave correct answer for rate of cardiac compression as 120/min in all subjects like adult, paediatric and infants. 72% doesn't know what AED stands for ('Automated External Defibrillator'). 84% couldn't recognize the first signs of foreign body aspiration and obstruction and its severity. 10% only knew about the importance of recovery position in unresponsive victims who is breathing spontaneously. 66% did not know the Canadian stroke assessment scale for recognizing early signs of stroke and 58% only know the signs of acute coronary syndrome. Seventy seven percent are having a poor theoretical knowledge about Basic Life Support, among them, 42.3% mean that their lack of knowledge in BLS is due to no awareness and no available professional training in their undergraduation and 97.18% think that Basic Cardiopulmonary Life Support training should be inculcated in their medical curriculum. Fifty percent think that Emergency physicians are the best qualified to guide them in BCLS training. (Figure 2, 3, 4). No one had complete knowledge on BCLS. Only Four out of 213 had secured 81-90% marks. Fifteen out of 213 had got 71 - 80% marks. Thirty eight of 213 had got 61 - 70% marks. Sixty two of the 213 had secured 51 - 60% marks. The remaining ninety-four secured less than 50% marks.

Sl. No.	Question	Yes	No
1	Heard about BLS?	170(79.8%)	43(20.2%)
2	Seen BLS being done?	66(31%)	147(69%)
3	Done BLS on patient?	12(5.6%)	201(94.4%)
4	Attended any workshop on BLS?	27(12.7%)	186(87.3%)
5	Think BLS should be done only in hospital?	14(6.6%)	199(93.4%)
6	Called emergency number?	38(17.8%)	175(82.2%)
7	Heard of Heimlich manoeuvre?	131(61.1%)	82(38.8%)

Table 1. Awareness Regarding BLS

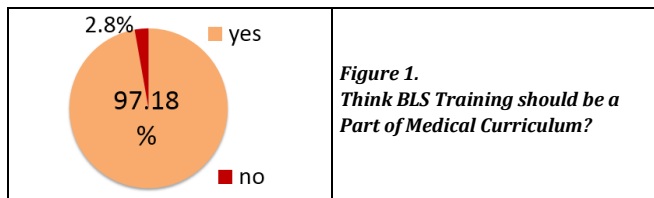


Figure 1.
Think BLS Training should be a Part of Medical Curriculum?

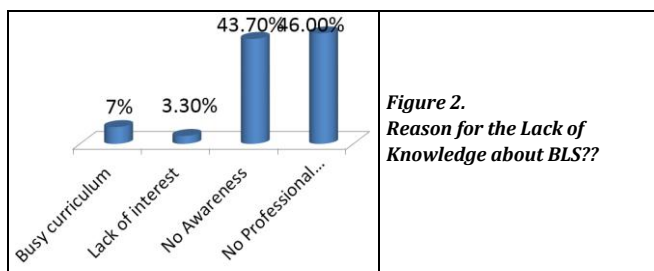


Figure 2.
Reason for the Lack of Knowledge about BLS??

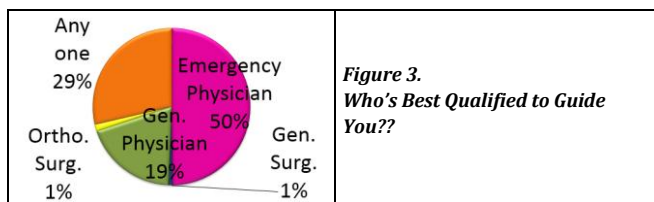


Figure 3.
Who's Best Qualified to Guide You??

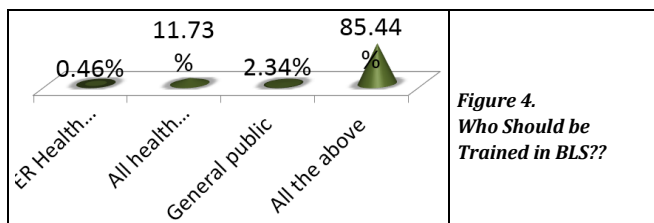


Figure 4.
Who Should be Trained in BLS??

DISCUSSION

The study results showed that medical students in the study group were severely lacking in the awareness of BCLS and also emphasizes the cognitive approach to the general awareness, perception and skills of Basic life support, early recognition of Acute Coronary Syndrome and Stroke.^{[6],[7]}

Ruesseler M et al also mentioned in their study that simulation training improves ability to manage medical emergencies.^[8] Shanta Chandrasekaran et al reported awareness of basic life support among medical, dental, nursing students and found only 2 out of 1054 had secured 80-90% marks. In our study, only 4 out of 213 secured 80 - 90% marks in the test.^[9] Hassan Zaheer et al concluded that inclusion of BLS course will increase awareness and application of this valuable lifesaving manoeuvre.^[10] Therefore, BLS training programmes should be mandatory for all medical students.

C. A. Graham et al studied a survey of undergraduate training in UK medical schools and found similar results.^[11]

CONCLUSIONS

Basic Life Support training is an absolute necessity for the medical students to face acute medical emergencies that they come across, even while pursuing their graduation. This also boosts the confidence of students and save many lives.

Recommendations

1. Health Awareness Camps on BLS training so that public health workers & general population would be aware of BLS.
2. There is a need to conduct more workshops, there by students can improve their practical skills.
3. BLS courses should be introduced at the earliest possible time into the medical curriculum.
4. Skill Labs or Scientific Laboratories should be established in all medical colleges in future for building awareness and standardization of quality of CPR.

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