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Education

ASSESSING KNOWLEDGE OF FIRST AID SKILLS AMONG FIRST YEAR MEDICAL STUDENTS AT BIMS COLLEGE, BELAGAVI

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ABSTRACT
Background: Adequate knowledge regarding first aid skills is highly important to save victim's life prior to hospital admission at the site of emergency/accident or any worsening illness. Recently, most of the medical colleges included formal first aid training in new teaching curriculum (i.e. foundation course) among first year medical students. **Aim:** To assess the level of knowledge among first medical students after formal first aid training **Methodology:** This cross-sectional study was conducted during January 2020 among 137 first year medical students. Data was collected by questionnaire method. Overall knowledge & each condition were graded based on the score as good, moderate & poor. **Results:** Good knowledge was observed only in 0.7% (01/137) total students, whereas moderate knowledge in 30% (42/137) & poor knowledge in 67% (93/137) students. Analysis of knowledge in selected conditions like adult & infant CPR was good (73.7% & 67%), but conditions like snake bite, frost bite, unconscious, myocardial infarction, choking etc had poor knowledge. **Conclusion:** The level of knowledge about first aid was not good among majority of the students & study also identified the key areas where knowledge was lacking. Thus, there is a need for more number of activities to reinforce their knowledge periodically regarding first aid in most of the medical conditions.

KEYWORDS : First aid, knowledge, medical students.

INTRODUCTION
Incidence rate in medical emergency conditions are alarming nowadays. In order to reduce the rate of mortality & morbidity acquiring first aid skills among first year medical students is highly important. By definition, first aid is to assess and to intervene the medical emergencies that can be performed by victim (or bystander) with minimal or no medical equipment, whereas first aid provider is defined as someone with formal training in first aid, emergency care or medicine who provides first aid [1].

Until a year back, knowledge of first aid was always been neglected subject which would make junior doctors to perform the first aid unsatisfactorily. Even though medical students are taught in some point how to handle emergencies in a hospital setting where drugs and other necessities are available but, the adequate knowledge required for handling an emergency without hospital setting at the site of the accident or emergency was lacking [2,3].

The significance of training in first aid & basic life support is now acknowledged world wide [4-9]. Recently our Medical council of India has included foundation course i.e., competency based undergraduate curriculum for first year undergraduate medical students which one of them is first aid learning program. Thus main objective of this study is to assess the level of knowledge in first aid skills after formal first aid training and to identify the area of the emergencies where the knowledge is lacking & to assess the student's opinion regarding need for regular based first aid training.

SUBJECTS & METHODS
This cross-sectional study was done in January 2020 in Belagavi Institute of Medical College at Belagavi of Karnataka. The target sample size was 150 first year medical students i.e., strength of students, but total of 137 students were present and 13 students were absent on the day of first aid skills questionnaire. Institutional ethical clearance was taken.

The students were briefed about objective of the study & their informed consent was taken for participation. Self administered anonymous multiple choice questionnaire was used for data collection to assess the knowledge of students regarding administration of first aid in different situations.

The question on management of common first aid emergencies such as seizures, chemical flashed victim, infant on choking, unconscious, number of adult CPR, myocardial infarction, foreign body on eye, depth of infant CPR, snake bite, airway blocked person, frost bite and epistaxis were asked.

The maximum score could be obtained was 12 and minimum being 0. Summation of the scores allotted to the most essential first aid management for medical emergency formed the basis of categorization of overall knowledge of students about first aid. The score between 0-4 was considered as poor, 5-8 as moderate & 9-12 as good.

Similarly, for each medical emergency condition the points were accumulated from overall responses to get the cut off value thereby to know the lack of knowledge in each conditions.0-45 was considered as poor score, 46-91 as moderate & 92-137 as good score.

RESULTS
A total of 137 students fully completed questionnaires were received with a response rate of 100%. Most students' age group were 18-21 years with a mean age 19.5 years. Number of boys and girls were 96 & 41 respectively.

Table No.1 Overall knowledge distribution among medical students

Knowledge distribution	No. Of students
Good score	01(0.7%)
Moderate score	42(30%)
Poor score	93(67%)

Table No. 2 Shows good knowledge in each conditions

Aspects of first aid management	Good knowledge
Adult CPR	100(73.7%)
Depth of chest compression in infant	93 (67%)
Chemical flashed victim	120 (87.5%)

Table No. 3 Shows moderate in respective medical emergency conditions

Aspects of first aid management	Moderate Knowledge
First aid in Snake bite	48 (33%)
First aid in Frost bite	46(35.03%)

Table No. 4 Shows the poor knowledge in each medical conditions.

Aspects of first aid management	Poor knowledge
First aid in Seizures	5(3.6%)
First aid in infant on choking	25(18.24%)
First aid in Unconsicous patient	13(9.4%)
First aid in Myocardial infarction	40(29.19%)
First aid in Foreign body on eye	07(5.1%)
First aid in Airway blocked	04(2.91%)
First aid in Epistaxis	15(10.9%)

DISCUSSION

In spite of prior first aid training, overall knowledge among medical students was not good. Similarly a Peruvian study reported 52.5% medical students had prior training in medical emergencies, 60.4% had poor knowledge about first aid [10]. A study conducted in lucknow, showed that there was less than adequate knowledge (52%) & practices (54%) in all group of participants [11]. Karachi based study found that 63.2% medical students had good, 28.3% moderate & 8.3% poor knowledge about first aid, which was better than our observations[2]. This meant that, not only is first aid training required at medical colleges it has to be reinforced periodically with refresher training workshops in first aid.

Regarding number of chest compression in adult & depth of chest compression in child, students were able to answer about CPR which was better observations in our study compared to other studies [2,12].

With respect to correct management of chemical flashed victim, nearly 87.5% students knew to flush the area with large number of water until ambulance arrives. But in areas of medical emergency conditions like seizures, choking, unconscious, myocardial infarction, foreign body on eye & epistaxis students failed to answer in respective conditions.

Thus, along with formal first aid session, it should be complimented with hands on experience or activities in order to increase students experience in practical procedures during medical course followed by its evaluation as there is a problem of assessment of practical competence.

The willingness of students to be trained regularly in first aid skills was found 100% which was quite similar to Karachi based study [2]. These measures will ensure that an increased number of first aid trainers are available at a time of any calamity faced by the people.

Although formal practical training might be the best way to teach first aid, other means such as electronic media or internet can be reinforce knowledge. A study conducted in Australia [13], concluded that even online training courses can also satisfactorily increase the first aid knowledge among high school students.

CONCLUSION

The level of knowledge about first aid was not good among students after formal training program. This study thus identified the need of periodic refresher training where students can provide first aid independently & spontaneously in real life situations. The study also identified key areas in which first aid knowledge was lacking. More such studies should be conducted to evaluate the knowledge and skills of first aid among doctors and medical students in India.

LIMITATIONS

This study has assessed the knowledge of first year medical students which is confined to only BIMS College and not the practical skills. Assessment of practical skills would have further helped the students in understanding the difficulties while performing the first aid skills.

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