

ASSESSMENT OF ADVANCED TRAUMA LIFE SUPPORT COURSE AMONG TRAINEES AS KEY TREATMENT OBJECTIVES: A CASE OF CPSP REGIONAL CENTRE PESHAWAR, PAKISTAN

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ABSTRACT

Objectives: To determine the outcomes of Advanced Trauma Life Support course among post-graduate trainees in Teaching Hospitals of Khyber Pakhtunkhwa (KP) province.

Material and Methods: A self-designed questionnaire was distributed amongst 200 postgraduate trainees who attended ATLS (Advanced Trauma Life Support Service) course from January 2014 to December 2016. Questionnaires were sent to post-graduate trainees from different public sector hospitals including Lady Reading Hospital Peshawar, Hayatabad Medical complex Peshawar, Khyber Teaching Hospital Peshawar and Ayub Teaching Hospital Abbottabad. Fifty trainees were selected from each hospital. The survey questionnaire was analyzed for ascertaining the demographic profile and other variables.

Results: Amongst 200 students, thirty one (15.5%) were from Anaesthesia, 46 (23%) were from General Surgery, 34 (17%) were from Orthopedics, 36 (18%) were from Accident/emergency, 09 (10.5%) were from Neurosurgery, 05 (16%) were from Cardiothoracic and 39(19.5 %) were from other surgical and allied specialties.

Conclusion: ATLS course enhanced the skills of trainees` approach towards management of emergencies.

Keywords: ATLS, Trauma, Life support.

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INTRODUCTION

Advanced Trauma Life Support (ATLS) is an essential teaching method for the initial assessment and supervision of trauma patients that aim to optimize primary care and reduce mortality and morbidity and have been adopted worldwide. Here in Pakistan, regrettably not much research has been done to find out the effectiveness of this sort of training. However, Heartfile (a Non-governmental organization) in collaboration with Government`s National Action Plan for deterrence and control of non-communicable

ble diseases carried out a survey at Rawalpindi and it was found that overall 17.7% males and 10% females suffer from injuries due to different factors. The questionnaire based interview characterized those who took up this particular educational resource at CPSP`s (College of Physicians and Surgeons of Pakistan) regional center Peshawar during a two years` period, and analyzed their perceptions about their clinical competence. Regardless of their previous level of training and experience, nearly all surgeons and anesthetists who took this course experienced that it has improved their clinical skills and other professional qualities. While assessing the impact of trauma education in terms of clinical process, preservation of skills and awareness, and the outcome of patients, one study concluded that the standard (ABC) approach of ATLS training is applicable to the care of all critically ill or injured patients and should be taught at junior level.

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No one could have imagined that when a light aircraft crashed in rural Nebraska in 1976, the nature of global trauma management would be altered forever. James Styner, an Orthopedic surgeon, was piloting the plane in question and the accident resulted in the death of his wife and serious injuries to himself and his four children. The standard of care that he and his family received in the local hospital in the aftermath of the crash so horrified Styner, that he decided to establish a new system for the management of major trauma¹⁻⁴. In 1978, Dr. Styner developed an educational program concerning trauma care that was quickly endorsed by the American College of Surgeons (ACS)^{5,6}. The ATLS course was started the United Kingdom in 1988. These type of courses are now run globally in 63 countries^{7,8}.

The premise of the ATLS program is to avert the greatest threat to life first. It also advocates that the lack of a definitive diagnosis and a detailed history should not slow the application of indicated treatment for life-threatening injury, with the most time-critical interventions performed early. During past decades, the ATLS guidelines evolved and improved based on the evidences provided from the studies. It is well established that improving the standards of care process would reduce mortality and morbidity in trauma systems^{2-5,8,9}. In this regard, ATLS sub-committee performs sequential additions to the guidelines based on expert opinion and select review of current literature^{4,6,7}.

ATLS courses have a uniform pattern:16 doctors from a mix of specialties relevant to trauma care are taught by a faculty of 6 to 10 trained instructors, who apply adult education theory to inculcate a systematized and collaborative approach to trauma care^{2,3}. Strong prominence on the individual guidance of candidates allows formative as well as cumulative evaluation of individual candidates. The course depends upon the eagerness of candidates as well as instructors, and teaching is carried out in a conducive and supportive environment. The significance and soundness of the course content is strengthened by the clinical credentials of those who teach it following four yearly updates suggested by American College of Surgeons Committee on Trauma¹⁰⁻¹².

The aim of this survey was conducted to determine the perceptions of postgraduate students about its

utility educational impact, relevance and challenges faced during the workshop.

MATERIAL & METHODS

A self-designed questionnaire was distributed amongst 200 trainees from different public sector hospitals (including Leady Reading hospital Peshawar, Hayatabad Medical complex Peshawar, Khyber Teaching Hospital Peshawar and Ayub Teaching Hospital Abbottabad) who attended ATLS courses from January 2014 to December 2016. Fifty trainees were selected from each hospital.

The questionnaire included the demographic profile of the candidates, questions about their perceptions about the utility, educational impact, relevance, and challenges faced during the workshop. The respondents were questions about the above-mentioned aspects using Likert scale responses (1, no use; 2, little use; 3, average; 4, useful; 5, very useful). All the data was collected on printed proforma and the results were analyzed using SPSS-23.

Table 1: Number of Centre and of Trainees.

Hospitals	No of Trainees
Hayatabad Medical complex Peshawar	50
Khyber Teaching Hospital Peshawar	50
Ayub Hospital Abbottabad	50
Leady reading hospital Peshawar	50

Table 2: Shows the specialties of the respondents.

No of specialties	No of respondents & % ages
Anaesthetics	31(15.5%)
General surgery	46(23%)
Orthopaedics	34(17%)
Accident/emergency	36(18%)
Neurosurgery	09(10.5)
Cardiothoracic	05(16%)
Others	39(19.5%)

Table 3: Preparedness of the respondents regarding their course.

Preparedness of the respondents	No of respondents with % ages
Well prepared	84(42%)
Adequately prepared	61(30.5%)
Poorly prepared	41(20.5%)
No answer	14(7%)
Total	100%

Table 4: Did the ATLS course improve your clinical practice?.

Improvements in Skills	No of candidates and % ages
Small improvement	43(21.5%)
Medium improvement	99(49.5%)
Large improvement	58(29%)
Total	100%

Table 5: Should ATLS be compulsory for FCPS?.

Yes/ No	All surgeons	All others
Yes	172 (86%)	187 (93.5%)
No	22(11%)	13 (6.5%)
Total	100%	100%

RESULTS

In all 200 questionnaires were sent to the trainees from Table 1 shows the distribution of participants belonging to different hospitals and table-2 shows the specialty distribution of postgraduate students. Forty-two percent students were well prepared to attend the course while about one fifth were poorly prepared (see table-3).

Regarding improvement in practice, about 1/3rd of students responded in positive (see table-4 for details). To a question that whether this course should be made mandatory, almost all students responded in positive (see table-5) Respondents were also asked to grade how useful they felt the skills stations were, using the same scale. The highest scoring skills stations were for the moulage practice (5.17) and the lowest scoring were Vascular Access and Shock Management (2.83) and Head and Neck Trauma Assessment (2.45).

DISCUSSION

This survey consisted of a cohort of postgraduate students belonging to different specialties that provided useful perspectives of the course. We have shown that a large number of students felt that their clinical practice has improved by attending the course, and 29% stated that there was significant improvement.

This highlights the value of the ATLS course as an educational experience that corroborates high quality trauma care. Previous research has shown that levels of core knowledge increased after an ATLS course⁴⁻⁶. This survey affirms that clinical confidence, perception of self, core knowledge and skills, and perceived ability to manage a seriously injured person and to teach others, all in-

creased after attending this ATLS course. These perceived improvements occurred across all specialties.

A large number of the respondents intended to take a refresher course on the expiry of their certificate after four years. Course organizers should be aware of this high level of intent, though whether this will translate into action remains to be seen. Most surgeons (79%) and anesthetists thought that ATLS Provider status should be compulsory for the FCPS examinations.

It should be noted, however, that 11 % of the surgeons and 6.5%% of the anesthetists did not feel that ATLS should be compulsory for their colleges' examinations. A significant weakness of this study is that the tool used was a non-validated questionnaire and was used amongst limited number of participants. Large scale surveys of this kind throughout the country using this tool or other validated tools need to be used to find the true impact of ATLS course.

CONCLUSION

ATLS course is perceived as an extremely useful course by doctors in all specialties involved in trauma management, and across all levels of doctors. Arranging such courses and workshops should therefore be encouraged, rather made mandatory. Practical problems like time and money for that purpose need to be arranged.

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AUTHOR'S CONTRIBUTION

Following authors have made substantial contributions to the manuscript as under

Jan WA: Main Idea, Course Instructor, Data Collection.

Haq MIU: Data Collection, Manuscript writing.

Khan AR: Critical review, final approval.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.