

Two-Day Primary Trauma Care Workshop - Is it Beneficial?

İki günlük birincil travma bakım çalışmayı yararlı mı?

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SUMMARY

Objectives: The aim of Primary Trauma Care (PTC) module is to orient medical doctors, residents and specialists to the initial assessment of an injured patient. A course based on expanded PTC was developed for some senior and junior medical students. This study was designed to determine if PTC improves the ability to perform and retain primary survey skills.

Materials and Methods: This workshop was held in Education Development Center of Tabriz Medical University in 27th and 28th of April, 6th and 7th of September, 22nd 23rd of November 2007. In this workshop the participants were given lectures, completed practices on moulaged patient and case scenarios about management of traumatic patient. All participants were given a pre-test at the beginning of the workshop and a post-test at the end.

Results: We invited 30 people in each workshop and 64 people were interested in attending the workshop from the total of 90 invited. The mean score in the pre-test and post-test was 18.84, 26.72 respectively ($p=0.00$).

Conclusion: Most of medical doctors and residents didn't have enough knowledge about basic PTC. We have shown that incorporating hands-on patient scenarios in an expanded course based on PTC principles helps medical students to retain the knowledge and skills needed to perform the primary survey sequence correctly. Medical students participating in PTC course retained the ability to perform a primary survey in proper sequence.

Key words: Medical doctor; primary trauma care; primary survey; workshop.

ÖZET

Giriş: Birincil travma bakımı (BTB) modülü tıp doktorları, asistanlar ve uzmanların, yaralanmış hastanın başlangıç değerlendirmesine oryantasyonunu artırmak amacıyla planlandı. Kıdemli ve kıdemsiz tıp öğrencileri için genişletilmiş BTB olarak kabul edebileceğimiz bir kurs gerçekleştirildi.

Gereç ve Yöntem: Tebriz Tıp Üniversitesi Eğitim Geliştirme Merkezinde 27-28 Nisan, 6-7 Eylül, 22-23 Kasım tarihlerinde BTB çalışmayı gerçekleştirildi. Bu çalışmada katılımcılara, travmalı hasta üzerine teorik dersler, vaka senaryoları ve mulaj hasta üzerinde pratik uygulamalar yaptırıldı. Çalışmanın başında ve sonunda pretest ile post-test yapıldı.

Bulgular: Her bir çalışmaya 30 kişi davet edildi, ancak üç çalışmaya toplam 64 kişi katıldı. Pre-test ve post-testin ortalama skorları sırasıyla 18,84 ve 26,72'ydi ($p=0,000$).

Sonuç: Birçok doktor temel travma bakımı üzerine yeterli bilgiye sahip değildir. Bu çalışma ile koordine biçimde hasta senaryoları üzerinden gerçekleştirilen bir travma kursunun, tıp öğrencilerinin birincil travma bilgi ve bakımı konusundaki becerilerini artırdığını gösterdik. Primer travma bakımı kursunda katılan tıp öğrencileri uygun biçimde primer travma bakımı verebilirler.

Anahtar sözcükler: Tıp doktoru; birincil travma bakımı; birincil baki; çalışma.

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Introduction

Trauma transcends all national boundaries. Many less wealthy countries have a significant proportion of road and industrial trauma in generally young population. Morbidity and mortality associated with such trauma can be reduced by early and effective medical intervention.

Training in medical schools for managing patients with life threatening injuries is often inadequate, haphazard, or even absent.^[1]

This Primary Trauma Care course is intended to provide basic knowledge and skills necessary to identify and treat those traumatized patients who require rapid assessment, resuscitation and stabilization of these injuries.

This course is intended to provide material by lectures and practical skill stations that represent an acceptable method of management for trauma. It provides a very basic foundation on which doctors and health care workers can gain necessary knowledge and skills for trauma management with minimal equipment and without sophisticated technological requirements.

There are several very successful and well organized trauma courses and manuals available, including the American Collage of Surgeons ATLS course and the Australian course EMST. The Advanced Trauma Life Support (ATLS) program has become the standard practice for the first hours of trauma care by many who provide care to the injured. Although senior medical students have shown the ability to acquire ATLS skill, it has been suggested that this format is too advanced to meet the needs of all senior medical students.^[2,3] These courses are directed to medical personnel in well equipped hospitals with oxygen, communication and transport capability and offer a comprehensive syllabus. The Primary Trauma Care is not a substitute for these courses, but uses similar basic principles and emphasizes basic trauma care with minimal resources.^[4]

Methods

This is an interventional clinical trial study, which assesses knowledge of the medical doctors and medical staff before and after the workshop. This workshop was held in Education Development Center of Tabriz Medical University in 7th and 8th of Ordibehesht (27th and 28th of April), 15th and 16th of Shahrivar (6th and 7th of September), 1 and 2 of Azar (22nd 23rd of November) of 1386 (2007).

Following the letters of invitation which was sent to doctors working in the emergency wards of province, an summon was issued from assistant director of health deputy of Health Ministry to 90 doctors including general physicians, residents of emergency medicine, general surgery, orthopedic science, neurosurgery and general surgeons. A total of 64 doctors participated in scheduled workshops and learned about primary care of traumatic patients according to the schedule. Each workshop lasted for 2 days and the participants had lectures, practical skill stations and case scenarios on both days. The first day's content included theoretical topics such as primary survey, secondary survey, airway management, chest trauma, shock and circulation evaluation; with skill practices on moulaged patient for airway management, chest tube placement, physical exam of trauma patient, log roll. The second day's content included theoretical topics such as trauma to abdomen, head, spine, pediatric trauma, pregnant trauma patient, burning; with practice on moulaged patient on pediatric intubation, neurological physical exam and patient transport. At the end of each day, they had case scenario based on the delivered lessons.

Participants were given a pre-test at the beginning of the workshop and a post-test at the end.

All the scores of participants' in pre-test and post-test were analyzed and compared in SPSS system.

All pre-test and post-test question papers were collected securely and the exam evaluators didn't know who the paper belongs to.

Result

We invited 30 people for each workshop session and 64 people were interested in this workshop from the total of 90 invited.

We graded pre-test and post-test papers and compared the grades before and after the workshop.

The mean grade in the pre-test and post-test was 18.84, 26.72 respectively (PV=0.00). This shows that there is a significant difference between the knowledge of the individuals before and after the workshop (Figs 1 and 2).

Conclusion

Most countries of the world are experiencing an epidemic of trauma, but the most spectacular increase has been in the developing countries. Proliferation of roads and use of

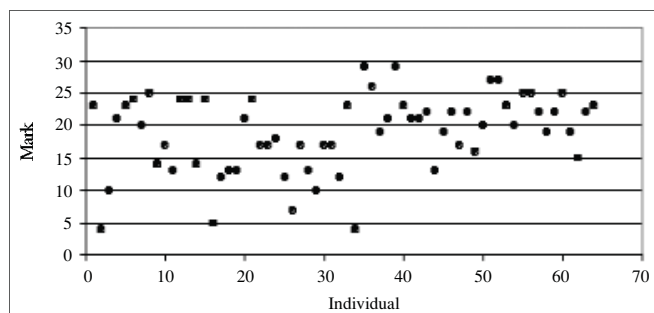


Fig. 1. The abundance of mark in pre-test.

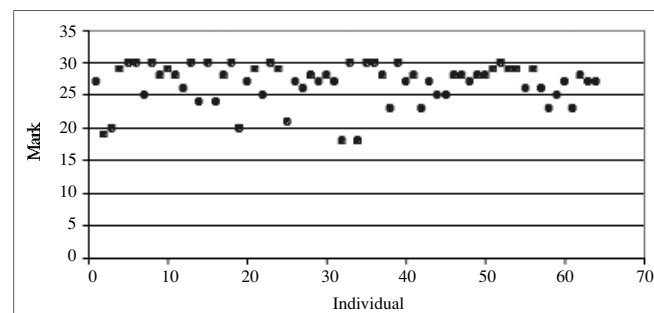


Fig. 2. The abundance of mark in post-test.

vehicles has led to a rapid increase in injuries and death and many peripheral medical facilities find themselves faced with multiple casualties from bus crashes or other disasters. Severe burns are also common in both urban and rural areas.

A number of important differences between high and low income countries make development of specifically designed Primary Trauma Care Course beneficial.

They include:

- The great distances over which casualties may have to be transported to reach medical facilities.
- The time taken for patients to reach medical care.
- The absence of high tech equipment and supplies.
- The absence of skilled people to operate and service it.^[4]

Over the past 30 years, the care of patients who suffered from traumatic injuries has evolved significantly. During this time, civilian trauma management benefited from lessons learned for caring for the wounded in battle. The concept of creating a standardized approach to trauma began in Nebraska in the late 1970s, and the first version of Advanced Trauma Life Support (ATLS) manual was released in 1980.^[5]

The driving concept behind the manual was the idea that by improving trauma care, clinicians could save patients with salvageable injuries and prevent long term disability and death. By creating an organized approach to the trauma patients, doctors began treating the greatest life threats first.^[5]

Prevention of trauma is by far the cheapest and safest mode to manage trauma.

This depends on the location's resources and factors such as:

- culture
- manpower
- politics
- health budget
- training

Every effort should be made by the trauma teams to address the above factors in the prevention of trauma. Much of this lies beyond the scope of this manual, but time will spent on the course looking at local circumstances and prevention possibilities.^[4]

In this workshop we showed that most of the medical doctors and residents didn't have enough knowledge about basic PTC and it is not clear that the graduating seniors would retain these skills during residency if they are not re-exposed to these skills.

We are not the first group to introduce PTC principles to junior medical students^[6] or some seniors, nor to document modified curriculum for students to teach PTC principles.^[7] We have shown that incorporating hands-on patient scenarios in an expanded course based on PTC principles allows medical students to retain the knowledge and skills needed to perform the primary sequence correctly.

Many physicians provide initial care for injured patients before transferring to definitive care. The basic PTC principles, including correct performance in primary surveys and management of potentially life-threatening injuries, are important concepts which are needed to be understood by these future physicians. Because not every student will have an opportunity to rotate on trauma surgery service, or have sufficient instruction about critical resuscitation, PTC provides a consistent and interactive curriculum for all junior medical students and has long term benefit.^[8]

In this study we showed that all medical students in any

level, and doctors and specialists needs to take these workshops periodically and have continuous classes and seminars in order to stay updated and skillful. They also must have Primary Trauma Care as one of the main courses in the university. This workshop will increase the knowledge of emergency health workers and will decrease the rate of mortality and morbidity for patients, but this will be dependent to the health policies and decisions of the health regulators.

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