
COLLEGE NEWS

ATLS course: Assessment and management of trauma

Trauma is the leading cause of death in the United States for persons aged one to forty and is surpassed only by cancer and arteriosclerosis as the leading cause of death in all age groups. Over 50-million injuries occur annually, ten million of which are disabling. More than 150,000 trauma-related deaths occur each year, and approximately 52,000 of these are the result of vehicular crashes. The cost in human suffering and dollars is incalculable. Deaths from other serious diseases have decreased in incidence over time, but trauma mortality continues to increase.

Trauma has no respect for age, is swift to attack and slow to retreat, and holds many pitfalls for the responsible physician. When prevention fails, the physician must be sufficiently knowledgeable to meet the injured patient's needs and reduce the mortality and morbidity from trauma.

The quality of the initial assessment and management of the severely injured patient may influence the final outcome, as it does with other critical illnesses. Trauma cuts across the entire field of medicine; thus physicians must have knowledge of a broad base of treatment principles and an appreciation of the many types of injury. An organized approach by trauma-care personnel can significantly reduce morbidity and mortality from trauma.

The American College of Surgeons was founded to improve the care of surgical patients. The ACS Committee on Trauma, be-

lieving that trauma is a surgical disease, has worked to establish standards for the care of the trauma patient. Accordingly, the Committee sponsored and contributed to the development of the Advanced Trauma Life Support (ATLS) Course. The ATLS course does not present new concepts in trauma care. It does use established treatment methods and approaches trauma care in a systematic manner, presenting to the physician a concise method of initiating a primary survey, secondary assessment, and subsequently the management of the trauma victim in the first few crucial hours.

Purpose of the course

The ATLS course is designed to teach the physician a standardized approach to caring for trauma victims within an hour after trauma occurs. Even though trauma is recognized as a surgical disease, it has been difficult to get some surgeons involved as instructors in the program. The life-saving skills taught in the ATLS course are surgically oriented. Two of the features originally written into the program to maintain its high surgical standards are that surgeons should be on the course faculties and that organizational control should be exerted by regional and state or provincial trauma committee chairmen. It is vital that all ATLS courses be conducted in a manner that reflects credit on the College.

The educational program consists of two courses: a provider/

student course and an instructor course. The provider/student course offers training in the concepts, skills, and techniques necessary for the initial management of the trauma victim through lectures, demonstrations, and a skill practicum. This format affords the physician the opportunity to practice life-saving techniques under realistic and simulated conditions.

The instructor course is a training program designed to teach physicians to become ATLS instructors. The course content emphasizes teaching methods and techniques. Training physicians how to teach the ATLS course is a way of expanding the faculty core in order to meet training needs for the provider/student courses.

Skill stations

The most valuable aspects of the ATLS course are the skill stations, where trained faculty teach "laying on of hands" techniques, and participants have the opportunity to practice the skills learned. Examples are endotracheal and nasotracheal intubation, intravenous techniques and fluid administration, tube thoracostomy, pericardiocentesis, cricothyroidotomy, peritoneal lavage, venous cutdown, use of the antishock garment, spinal immobilization, and trauma problem-solving exercises consisting of initial patient assessment and interpretation of radiographs. The surgical procedures are conducted on anesthetized and ventilated

animals prepared for surgery under conditions that meet federal standards.

Perhaps the most demanding and rewarding skills taught are those of the initial assessment and management of the multiply injured patient. An individual made up through the use of moulages to look like a multiply injured patient and coached to act out his injuries is presented to the student for assessment. The student receives a case history and appropriate physical findings. Within a specified time and in a systematic manner, the student is expected to assess and manage the simulated patient, order and interpret the appropriate laboratory tests and x-rays, and perform the proper life-saving techniques

to prevent the programmed patient from succumbing to his injuries.

To complete the course successfully, the student must demonstrate to the faculty's satisfaction that he is able to perform the life-saving techniques. Should a student not perform satisfactorily at the skill stations or on a written test, he or she is offered the opportunity to repeat portions of the course.

Response

Physician response to this educational format has been favorable. Although the College has never formally advertised the availability of the ATLS course, more than 11,000 physicians have attended over 650 courses in the

past 2½ years, indicating the popularity of this program. Enthusiastic response from the participants and their subsequent word-of-mouth promotion of the course have made advertising unnecessary.

The ATLS course is now being conducted in 49 states, and in Canada, Puerto Rico, the U.S. Virgin Islands, and Europe. Students trained in ATLS include the bush physicians in Alaska and physicians from Guam, Central America, England, and West Germany. Some state trauma committees are trying to have the ATLS course included in their medical school curricula. The Canadians are planning to have the ATLS manual translated into French. There has also been discussion of a Spanish translation. The ACS trauma committee's military region is considering a plan to train civilian and military physicians working in military hospitals in Europe to the ATLS method.

The ATLS course and related materials, such as slides, x-rays, patient-management problems, manuals, and tests are repeatedly revised as new procedures, trends, and methods for teaching and training physicians in trauma care become available. Information on the availability of courses can be obtained from the trauma department of the American College of Surgeons.

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Emergency medical technician poses as burn victim.