

Can You Make the Diagnosis? A Thoracic Vertebrae Fracture Case Study

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EMTs are called to the scene for a 24-year-old male who was skydiving and landed in a retention pond on his knees. He removed his gear, walked out of the pond and lay down voluntarily, which is how he was found by the first responders. He was complaining of left side pain. He reported no loss of consciousness, and denied head trauma and neck pain.

A cervical collar and backboard were applied because he would not sit up or stand due to his pain. Vital signs are stable. Other than abrasions to his knees, and tenderness in his LUQ/flank, his Rapid Trauma Survey is unremarkable, including an intact neuro-

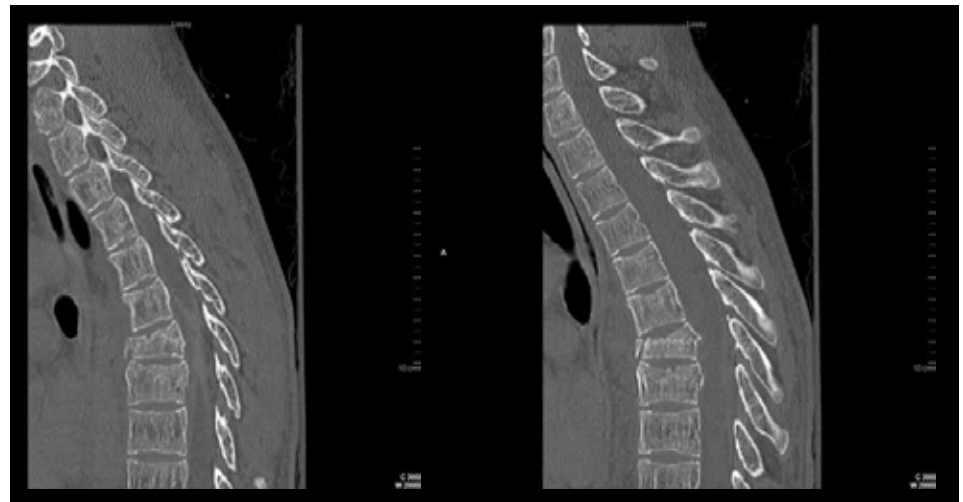


Figure 1: Thoracic MRI scan of a skydiver who landed in a retention pond on his knees and presented complaining of left side pain.

logical status. Based on his mechanism of injury and assessment, what should be in your differential thought process?

The emergency department evaluation was consistent with the prehospital findings. His vital signs were stable; mental status remained unchanged; no spinal tenderness was noted; tenderness was still present in the LUQ; and he remained neurologically intact. Additionally, there was good rectal tone.

Appropriate radiological imaging was initiated. A CT scan of his abdomen/pelvis obtained for suspicion of an intra-abdominal injury was unremarkable. However, a chest x-ray obtained noted on the lateral view mid thoracic vertebrae fractures. A subsequent thoracic MRI scan was obtained. (Figure 1)

The MRI revealed a comminuted compression fracture of T7 with a 50% loss of anterior vertebral body height, comminuted compression fracture of T8 with a 15% loss of the central vertebral height, and non-displaced superior endplate fractures at T4-6. Additionally, there was a suspicion for ligamentous disruption making the fractures unstable.

The patient subsequently was transferred by helicopter to a trauma center, and after neurosurgical evaluation, was taken to surgery where a posterior screw and rod placement from T3-11 provided stabilization. After an extended stay, he was discharged home with a brace.

Falls from a height are associated with fractures of the lower extremities, pelvis, and

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Longtime ITLS Instructor Remembered Fondly

Russell Potts, an ITLS Instructor for more than 20 years, passed away May 23 in his home in Auburn, Illinois, after a battle with cancer. He was 80 years old.



Russell Potts

Russ was a graduate of the second BTLS instructor course held in Illinois at Christ Hospital in 1986. He remained an active instructor over the next 20 years and was named the Illinois Instructor of the Year in 2001. The final course he taught at was one of ITLS Illinois' courses for rural EMS providers held in Litchfield in 2008.

As ITLS Illinois Affiliate Faculty and longtime friend Dave Meiners recounts, Russ always liked teaching the spinal injury lecture and practical station. "He was very particular about the lecture and station, and his teaching colleagues found out why after teaching with him for several years," Meiners said.

"The conversation started about how each of us began teaching, and Russ said he was a mining engineer by profession. In the late 1960s, he witnessed his only son suffer a fatal cervical spine injury during a high school football game. Russ said engineers are trained to always look for a better and more efficient way to do things. He became interested in better ways to treat cervical spine injuries as well as all other types.

"When EMT training came to Illinois, Russ took one of the first EMT classes in Springfield, Ill., and then went on to become a paramedic. Russ taught from then on and embraced BTLS (now ITLS) when it came to Illinois."

Russ was also a founding member of the Auburn Emergency Squad.

As an ITLS Instructor and in all aspects of his life, Meiners said, Russ was gregarious, very knowledgeable, sarcastic, tireless and just plain fun to be around.

"He will be sorely missed by his family, friends and especially by his ITLS teaching buddies and students," Meiners said.

Robert Smith, a former ITLS Illinois affiliate faculty, remembers Russ in the same light.

"Russ always brought his wife along to the weekend courses, and she always seemed to bring 'goodies' for the instructors to eat. Dave Meiner and I were the only two Illinois AFs south of I-88 and we were busy from that line south. Russ made himself very valuable in being there when we needed him, would lecture on any subject and would gladly do any station.

"Russ never, to my recollection, took any monetary reward or any money to pay for his expenses to teach at these courses. He just did this for the love of teaching trauma, and especially BTLS trauma.

"For those of us who had the opportunity to teach and work with Russ, and there are still a few of us around, we will all miss Russ and his kind and gentle teaching and dedication to helping other EMS personnel excel."

Russ is survived by his wife, Maggie, whom he married in 1950; three daughters, Jane (Dan) James, Carla Potts and Marylyn (Steve) Grant, all of Springfield; three grandchildren; five great-grandchildren; and several nieces and nephews. He was preceded in death by one son, Michael Potts.

Case Study: Thoracic Vertebrae Fractures

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spine. Nearly 25% of falls from a height of a story or more result in a spine fracture, with the majority a major compression or burst fracture.

The thoracic spine is the longest section of spine that is rigid with the smallest vertebrae. The added support of the rib cage means a large force is necessary to overcome its intrinsic stability. While injury to the thoracic spine is less common than in other regions, when it does occur it usually is significant.

Of the four types of fractures (compression, burst, flexion-distraction, and fracture-dislocation), the compression or wedge fracture is the most common because of the natural curvature of the spine.

Because of the relatively small spinal canal, the risk of spinal cord injury is increased. However, the majority of fractures are without spinal cord injury. When cord injuries occur, they usually are complete. 60-70% of the fractures are at the thoracolumbar junction because this area sustains the greatest amount of stress during motion.

Of additional importance is the association between thoracic spine fractures and pulmonary injuries, including mediastinal hemorrhage. Therefore, these patients must also be evaluated for associated aortic injuries.

Special thanks to Dr. Eileen Couture for sharing this case study.

Instructor Update Online Now Available

The ITLS 6th Edition Instructor Update Online program is now available. The program was created for instructors who have not yet been updated to the 6th edition ITLS Provider manual.

The Instructor Update Online is video-based (MP4 format), available to download for \$25. Load the video onto your iPod or other video player for a portable podcast solution. Or watch the video directly on your computer using QuickTime or other video software.

After watching the 1-hour video in its entirety and completing a brief exit survey, current instructors will be recertified and receive a renewed Instructor card. They will also receive a certificate of CECBEMS continuing education credit.

The program may be utilized by any instructor whose card expired on or after January



1, 2006. (If a card expired before this time period, please contact Sue McDonough at suem@icep.org or 630-495-6400, ext 201, for details on how to renew your Instructor status.)

The Instructor Update Online program will be available for purchase through December 31, 2010. All parts of the program must be completed by this date in order to receive an updated card, including the mandatory

exit survey required after viewing the video.

If you are an ITLS instructor or medical director who did not attend one of the Instructor Updates conducted around the state in 2008-2009, the Instructor Update Online provides an opportunity to become updated to the 6th edition textbook. All instructors, affiliate faculty, course coordinators and course medical directors are required to take an Instructor Update to maintain their certification.

Eligibility Requirements for Current Instructors

The ITLS Board of Directors has set the following requirements to determine whether an instructor is eligible to recertify using the Instructor Update Online. Candidates must meet **all** requirements.

1. The ITLS 6th Edition Instructor Update Online program is designed as a renewal tool for instructors who have not yet been updated to the changes in the 6th edition ITLS for Prehospital Care Providers manual.
2. Candidates must be seeking ITLS Instructor recertification/renewal. This program cannot be used by Providers seeking first-time Instructor certification.
3. Candidates must hold a valid ITLS Instructor card with an expiration date of January 1, 2006 or later. If candidates do not possess a hard copy of their card that meets these requirements, they may submit a letter of verification from their Chapter Coordinator or Chapter

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Issue of Written Exam Passing Score Clarified

The ITLS Editorial Board recognized recently that there has been some confusion on the minimum written test score percentage needed to pass the ITLS written tests.

The following statement was released to help clarify the issue:

To pass the ITLS written tests, the stated minimum is 74%. Because the number

of test items is 33, a score of exactly 74% cannot be achieved. For these particular tests, a learner's minimum score needs to be at least 76% (maximum eight questions wrong); nine wrong questions yields a 73% which does not meet the minimum.

ITLS apologizes for any confusion this has caused.

ITLS eTrauma Program Offers a Self-Paced, Flexible Alternative to Classroom Courses

ITLS eTrauma, the new online course developed by International Trauma Life Support, sets the standard with online education that's interactive, flexible, accessible, and affordable for all. ITLS eTrauma covers the eight hours of ITLS Provider classroom instruction in a self-paced format that fits the non-stop life-style of trauma care providers.

ITLS Illinois encourages its instructors, affiliate faculty, and course coordinators to consider integrating eTrauma and Completer Courses into their organizations' ITLS offerings. ITLS eTrauma offers a new way to certify students and increase training while targeting new markets:

- Local or regional training programs – If ITLS eTrauma is implemented as part of paramedic training programs, these programs or their sponsoring organization will have a dedicated and ongoing source of ITLS training — with additional opportunities for recertification down the line.

Programs who wish to purchase a large number of eTrauma registrations may be eligible for a volume discount. For more information on bulk purchasing, please contact Kate Blackwelder at kateb@icep.org or 630-495-6400, ext. 205.

- Students with limited travel capacity – Financial and time constraints prevent students from being able to travel great distances to become ITLS-certified. Now students can do half of the program on their own time, in their own homes, and only need to take off 1 day of work to complete the certification.

ITLS has put together guidelines for eTrauma implementation to help answer questions



and ease the process of making ITLS eTrauma a new part of your organization's offerings. The ITLS eTrauma Guidelines for Implementation are available free of charge to approved Course Coordinators. Request the PDF document by contacting Chapter Coordinator Sue McDonough at suem@itrauma.org or 630-495-6400, ext. 201.

ITLS eTrauma Course Overview

The ITLS eTrauma program consists of 13 lesson modules corresponding to Provider course lectures and based on the didactic chapters of the 6th edition ITLS for Prehospital Care Providers manual.

Because of the program's comprehensive approach, ITLS eTrauma is appropriate for all levels of EMS personnel. Students register for either the Advanced-level or Basic-level course to ensure that they are tested only on material appropriate to their skill level.

ITLS eTrauma is accredited by CECBEMS to provide 8 hours of continuing education credit for students who complete the program. Students must successfully complete Lesson Quizzes at the end of each of the 13 modules before credit is granted.

To fit students' diverse needs, ITLS eTrauma is a multifaceted solution that can be utilized in two different ways:

1. For continuing education only: The program is self-paced and flexible to meet

the time constraints of students who juggle multiple commitments. Students looking for CE hours in trauma specifically or in emergency care in general can work through the 13 lessons as quickly or as slowly as their schedule permits. (Students may access eTrauma for 1 year from the date of their first login.)

2. For ITLS Provider certification: Students who wish to become ITLS Provider certified can use ITLS eTrauma as the didactic part of a flexible alternative to the traditional 2-day in-person ITLS Provider course as a method for earning ITLS certification.

After successful completion of ITLS eTrauma, students become eligible to register for an ITLS Completer Course. Completer Courses are organized by local course coordinators, just like Provider Courses. The Completer Course provides a setting in which to learn, practice, and demonstrate proficiency of the necessary skills that comprise the practical assessment of the ITLS Provider course, thus earning ITLS Basic or Advanced certification. The ITLS Written Exam is also required at the Completer Course.

If you are interested in using ITLS eTrauma and a Completer Course to earn your ITLS certification, you are encouraged to contact Sue McDonough for her help in finding a Completer Course. The Chapter is compiling a list of students who need the Completer Course and working to meet those needs.

Course coordinators interested in running a Completer Course in their area should also contact Sue for resources including the required components and sample agendas for the 1-day Completer Course or a 2-day combined Provider-Completer Course.

Chapter Aims to Spread ITLS Pediatric Training Statewide with Courses, Text

The ITLS Illinois Advisory Committee is looking to increase the amount of Pediatric Providers and Instructors in Illinois in the coming months, hoping that the ITLS Pediatric program will begin to spread statewide.

This initiative was started in May with the first of a series of classes coordinated by the ITLS Illinois Chapter. A Pediatric Provider course was held in Downers Grove on May 15.

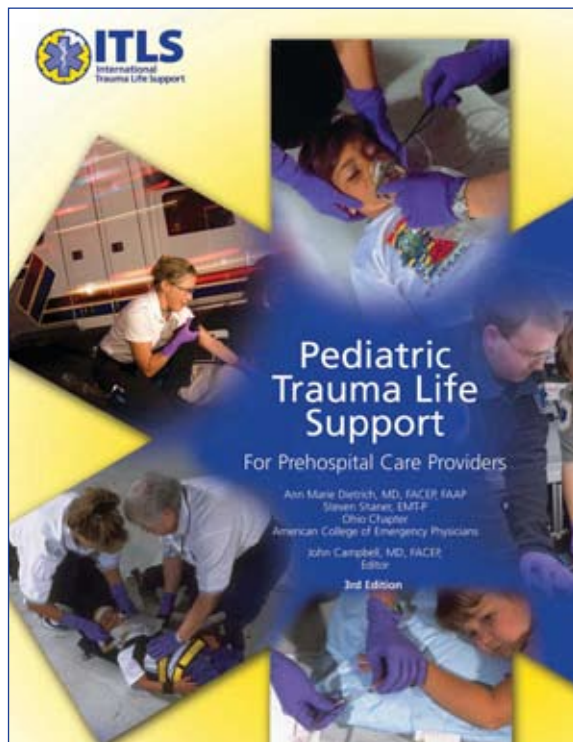
A Pediatric Instructor Update is next on the agenda, scheduled for Friday, June 18 at Memorial Hospital in Belleville. This course is open to all individuals who are current Pediatric Instructors and need to be updated to the 3rd edition Pediatric provider manual that was released in 2009. The course will run from 8:00 AM to 11:00 AM and costs \$25.

To register, please contact Course Coordinator Scot Allen at 630-495-6400, ext. 218, or by email to scota@icep.org. If you have questions about whether you are eligible to attend the Update, contact Sue McDonough at the same phone number, ext. 201 or email to suem@icep.org.

How to Get Started with the ITLS Pediatric Program

The ITLS Pediatric course reflects the same ITLS method of assessment and management found in the ITLS Provider course, but with an emphasis on the unique needs of the pediatric trauma patient. In addition, the program highlights techniques for communicating with young patients and their parents.

The course is based on the 3rd edition textbook and corresponding course materials,



which were updated in 2009 to reflect the latest and most effective approaches to the care of the pediatric trauma patient. The program conforms to the most recent American Heart Association guidelines for artificial ventilation and CPR.

The ITLS Board of Directors revised the Pediatric instructor policy in 2009 with the goal of encouraging a greater number of individuals with pediatric expertise and interest to become involved with and teach the ITLS Pediatric program.

Under the new policy, current ITLS instructors need to take the Pediatric Provider course, earn Instructor Potential, and be monitored teaching the Pediatric course (lecture, skills station and patient assessment). There is not an additional Pediatric Instructor course to take. The same requirements apply to current instructors of other advanced pediatric

courses, such as PEPP or PALS, who wish to teach ITLS Pediatric.

If you are interested in attending an ITLS Pediatric Provider course or having a course at your facility, please contact Chapter Coordinator Sue McDonough for information and help with arranging the program.

ITLS Pediatric Program Materials

The complete set of ITLS Pediatric materials, just revised in 2009, is available, including the full-color 3rd edition textbook; the Provider Course instructional slides; a Coordinator & Instructor Guide with equipment lists and skill station instructions; the 3rd edition ITLS Pediatric tests for Basic and Advanced providers; and a brief PowerPoint slide set for updating instructors to the content

changes in the textbook. A document outlining all of the changes on a chapter-by-chapter basis is also available to current instructors and coordinators to determine how the course material was updated in the 3rd edition textbook.

The textbook, Provider Course instructional slide set, and Coordinator & Instructor Guide may be purchased online at www.itraumaLL.org. The cost of the textbook is \$38. The PowerPoint slide set is \$25 and the Coordinator & Instructor Guide is \$35. Or, save \$5 on the set by purchasing the Instructor Tool Kit, which includes both items for \$50.

The ITLS Pediatric tests and the Instructor Update slide set are available free of charge to approved course coordinators by contacting Sue McDonough. The "What's New in the 3rd Edition ITLS Pediatric Manual" sheet is also available by contacting Sue.

Find an ITLS Illinois Course

Students Can Search for Courses Online with CMS

It's easy to find an ITLS Illinois course using the Course Management System (CMS) online. Go to <http://cms.itrauma.org> and click the "Search for a Course" link at the top of the page to begin.

The page gives you many different search criteria options to refine your search results. To get the maximum number of results, put in as few search criteria as possible.

For example, if you are looking for a Provider Recertification course, enter "Illinois" as the Chapter, enter "Provider" as the Course Type, and enter "Re-certRefresh/Update" as the Description. Leave all other fields blank. The search results show all upcoming Provider Recertification courses in Illinois.

To see a listing of **all** of the scheduled ITLS courses in Illinois, enter "Illinois" as the Chapter only. This list shows you all of the upcoming courses input to the CMS to date.

If the search does not return a course that meets your needs, contact Sue McDonough for assistance. There may be other courses that have not been put into the CMS yet that the Chapter is aware of.

UPCOMING COURSES

JUNE 11-12, 2010

Combined Provider Certification
Lincoln, IL

JUNE 18, 2010

Pediatric Instructor Recertification
Belleville, IL

JUNE 24-25, 2010

Combined Provider Certification
Franklin Grove, IL

JUNE 24, 2010

Combined Provider Recertification
Decatur, IL

JUNE 24-25, 2010

Combined Provider Certification
Belleville, IL

JULY 24-25, 2010

Combined Provider Certification
Champaign, IL

AUGUST 10-11, 2010

Combined Provider Certification
Mount Vernon, IL

SEPTEMBER 17-18, 2010

Combined Provider Certification
Belleville, IL

NOVEMBER 1, 2010

Combined Provider Recertification
Decatur, IL

6th Edition ITLS Instructor Update Online Now Available

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Medical Director as an alternative. This letter must state that the candidate is an approved ITLS Instructor and the Chapter grants permission for said instructor to renew their certification through this program.

4. By purchasing and viewing the program and completing the exit survey, the candidate attests that he/she has met the Chapter's teaching requirements for Instructor Recertification.

In Illinois, an instructor is required to instruct at an ITLS courses three times within their three-year certification period.

Candidates who are uncertain whether they meet these requirements should contact Chapter Coordinator Sue McDonough before registering for the Instructor Update Online. (Instructor Recertification issued via the ITLS 6th Edition Instructor Update Online will be rendered invalid and revoked if the Instructor has not fulfilled the teaching requirement.)

Any other questions about the Instructor Update Online may be addressed to Sue McDonough by phone or email.

If you need technical support or have trouble downloading the Instructor Update Online after registration and purchase, please contact Kate Blackwelder at kateb@icep.org or 630-495-6400, ext. 205.

Upcoming ITLS Illinois Advisory Committee Meetings

Friday, June 18 - 11:00 AM-1:00 PM

Memorial Hospital, Belleville
(videoconferencing at ICEP office in Downers Grove available)

Wednesday, September 15 - Time TBD

Location TBD - videoconferencing will be available

Wednesday, December 8 - 10:00 AM-12:00 PM

ICEP Office, Downers Grove (videoconferencing available)

All Affiliate Faculty are welcome to attend these meetings.

ILLINOIS ITLS *news*

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Save the Date for 2010 ITLS International Trauma Conference in Reno in November

Blue skies and open roads are on the horizon for ITLS! Save the date and plan now to attend the 2010 International Trauma Conference on November 4-6, 2010, in Reno, Nevada.

CONFERENCE HOTEL

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trict, just minutes from the airport and downtown Reno.

A special rate of \$99 per night plus all applicable taxes has been arranged for conference participants and exhibitors. Use Group/Convention Code ITLS when making your reservation. The cut-off date for this rate is October 11, 2010. The hotel also offers complimentary shuttle service from the airport for registered guests.

For more information, watch www.itrauma.org/conference. The conference brochure with the complete session line-up and online



registration will be available at the end of June.

Last year, ITLS Illinois had one of the largest delegations at the conference, with 14 representatives in attendance. We hope many of our course coordinators and instructors will join us in Reno in November.