

Can You Make the Diagnosis?



**Art Proust,
MD, FACEP**

A 71-year-old female was struck on her posterior left side by a SUV in a parking lot. She sustained head impact but had no LOC. A nurse at the scene was providing C-spine control until paramedic arrival.

Paramedics found the patient alert, lying on her left side, c/o neck, left groin, left ankle and right knee pain. She offered no other complaints. Primary and secondary surveys revealed cervical spine tenderness, left pelvis discomfort without instability, left ankle swelling and tenderness, and mild right knee tenderness. Her GCS was 15; neurovascular status in all extremities was intact. The patient had full C-spine immobilization in the field, an IV was established with fentanyl provided for pain, and she was brought to the ER.

Upon arrival, she was alert and oriented x 4. Vital signs were: T 97, P 93, R 20, and BP 128/60. Her exam was consistent with

paramedic evaluation and was remarkable for cervical spine tenderness without step off. Her abdomen was tender in the lower quadrants, left more so than right. The pelvis was tender to palpation on her left without crepitus or instability. Her left ankle was swollen and tender at both malleoli; the right knee noted tenderness, a large abrasion and no effusion. There was no sign of head, chest, back, or upper extremity involvement. Her GCS remained 15 and neurovascular status in her extremities remained intact. What is your impression?

The assessment raised suspicion for injuries to her cervical spine, abdomen, pelvis, left ankle, and right knee. Imaging revealed an unremarkable head and cervical spine CT. Abdomen and pelvis CT was remarkable for no solid organ injury but revealed a fracture of the left superior ramus (near the acetabulum), a fracture of the left inferior pubic ramus, and a comminuted, nondisplaced fracture of the right sacrum. Also, there was widening or diastasis of 2.5 cm of the pubis symphysis with fracture, as well as widening of the left sacroiliac joint of 12 mm (an open book pelvis) (Figure 1).

The left ankle fracture noted a comminuted, mildly angulated fracture of the distal fibula, and a comminuted avulsion fracture of the medial malleolus (Figure 2).



Figure 2

Chest and right knee x-rays were unremarkable. The remainder of her laboratory data also was unremarkable. Appropriate analgesics were provided and she remained hemodynamically stable. Her pelvis was stabilized with a Sam Sling, and a short leg posterior mold was applied to her ankle fracture. Because of the complexity of her pelvic fracture, the patient was transferred to a Level I Trauma Center. There, she had an open reduction and internal fixation of her ankle fracture and anterior external fixation of her pelvis. After inpatient rehabilitation, she was subsequently transferred to a rehabilitation center and was following up with orthopedic surgery.

Pelvic fracture is a disruption of the bony structures of the pelvis. The bony pelvis con-

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Figure 1



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Case Study Examines Pelvis Fracture with Hemodynamic Instability

sists of the ilium (i.e. wings), ischium and pubis, which form an anatomic ring with the sacrum. Disruption of the ring requires significant energy and there is frequently associated injury to the organs contained within the bony pelvis such as the bladder. Also, trauma to the extra-pelvic organs is common. Additionally, associated severe hemorrhage may occur due to the extensive blood supply to this region.

Pelvic fractures associated with the greatest morbidity and mortality involve significant forces such as from a motor vehicle crash (50-60%) or fall from a height (10-20%). Mortality rates range from 3-20%, and hemorrhage, either pelvic or extra-pelvic, or associated severe head injury are the most common causes of early death. Multisystem

organ failure and sepsis resulting from soft tissue infection near the fracture site are the main causes of delayed death.

Tenderness, laxity, or instability on palpation of the bony pelvis suggests fracture. Other signs that may suggest a pelvic fracture include hematuria; hematoma over the ipsilateral flank, proximal thigh, or perineum; rectal or vaginal bleeding; scrotal hematoma (males); or blood at the urethral meatus.

Prehospital care consists of addressing life-threatening conditions. Be aware that the amount of force necessary to cause a significant pelvic fracture is likely to have caused other significant injuries. Application of an external compression device to a grossly

unstable pelvis will provide mechanical stabilization while controlling hemorrhage. A sheet or a commercial product may be used. Extensive manipulation of a fractured pelvis can increase the patient's discomfort and potentially increase bleeding, and therefore, should be avoided. Obtain large-bore IV access, and administer analgesia and fluids per local protocols while closely monitoring vital signs.

Hemodynamically unstable patients with unstable pelvic fractures require emergent orthopedic consultation for possible external fixation. Pelvic or retroperitoneal packing may be required for hemorrhage control during surgery. Finally, interventional radiology may also have to be consulted for embolization in the unstable patient.

PHTLS to ITLS Provider Bridge Course Closes Critical Gap for EMS Systems

Greg Love, EMT-P
ITLS Illinois Affiliate Faculty

The PHTLS to ITLS Provider Bridge Course was born from the desire of an EMS system to transition their trauma course to ITLS after having required PHTLS for a number of years. The process started in the spring of 2008 and culminated with approval of the Provider Bridge Course by ITLS International in January of 2010. During this time, several pilot courses were offered by the Peoria Area EMS System, which were invaluable for the feedback received.

As reported in the Winter 2009 newsletter, prior to the development of this bridge course, a transition from PHTLS to ITLS would

have necessitated each person wishing to renew their trauma training remain in the same program, in this case PHTLS, or take a 2-day ITLS provider course, which would ultimately cover a great deal of information already known by the attendee. Since such a move would double the amount of time required by each provider, this would be a very hard sell for any EMS system.

Les Heffner, EMT-P, from Rushville, Affiliate Faculty for ITLS and a PHTLS instructor, took the lead on identifying the topics which had the greatest disparity between the two programs. Together, we worked to identify which of these topics really needed to be addressed and how that would fit into a one-day refresher course. The topics that

had the greatest disparity between the two programs included Airway, Shock, Head Injury and Patient Assessment.

In developing the new agenda, the goal was to provide instructors time to present the ITLS lectures with a focus on the new information and terms used in ITLS. The bridge course agenda does not provide as much time for each of these lectures as provided in the two-day ITLS provider course agenda. The agenda for the bridge course assumes knowledgeable practiced participants.

Some discussion will and should occur on differences between the two programs in

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Join ITLS in Nashville on October 26-28 for 2011 International Trauma Conference

Music City sounds so good for the 2011 ITLS International Trauma Conference! The conference will be held in Nashville, Tennessee, on October 25-28, 2011 at the Nashville Marriott Airport Hotel.

The full conference brochure will be available shortly. A flier that includes speakers and sessions is available now at ITRAUMA.org/conference. Registration will open online July 1.



Please note that the day pattern for the 2011 conference is slightly different. A Completer Course for eTrauma Students will be held on Tuesday, October 25. Preconference workshops will be held on Wednesday, October 26, with the conference Welcoming Reception on Wednesday evening. The first day of the conference will be held on Thursday, October 27, and the social event will be held Thursday evening. The conference will conclude on Friday, October 28.

CONFERENCE HOTEL

Nashville Airport Marriott

600 Marriott Drive

Nashville, Tennessee, 37214

Phone: 615-889-9300 or 1-800-770-0555

Make your reservation online:

www.itrauma.org/nashvillemarriott

The Nashville Airport Marriott, one of Music City's most popular convention hotels, was recently renovated and sparkles with fresh details. Convenient to the airport as well as popular Nashville sites, the Marriott provides an ideal home base for the International Trauma Conference. The special ITLS room rate of \$123 per night plus all applicable taxes includes complimentary airport shuttles, free on-site parking, free wireless Internet in guest rooms, and complimentary

shuttle service to downtown Nashville on conference evenings. The cut-off date for this rate is October 3, 2011. Use the reservation link above or group code **TLSTLSA** when making your reservation.

EDUCATIONAL HIGHLIGHTS

Conference sessions focus on a wide range of trauma and prehospital hot topics, with a special emphasis on pediatric trauma.

- **Joseph Holley, MD, FACEP**, will illustrate unique medical management issues and the complex scope of response created in the disaster setting
- **Jeff Hinshaw, MS, PA-C, NREMT-P** will review invasive prehospital procedures with a focus on improving techniques and mitigating complications
- **Scott Matin, MBA, NREMT-P and Robert Bauter, MAS, NREMT-P**, will incorporate age and co-morbidity factors into field triage protocols for managing elderly trauma patients
- **James Boise, RN, CFRN** will analyze decisions in trauma resuscitation and treatment priorities of rodeo cowboys to impact patient outcome
- **Vito Cianci, MD, and Gianluca Ghiselli, MD**, will evaluate the field application of ultrasound for EMS

and its effectiveness as a prehospital diagnostic tool

- **Suzanne Buchanan, RN, BSN, CCRN** will identify best practices for the emergency management of burns – at the scene, during transport, and in the hospital
- **Lee Blair, RN, CEN, EMT-P**, will distinguish early changes in the assessment of pediatric trauma patients that should influence treatment decisions
- **Corey Pittman, NREMT-P, CCEMT-P, AASc.-EMS** will outline therapeutic treatment modalities for crush syndrome injuries and other tractor accident traumas
- **Mark Meredith, MD** will discuss the specific challenges of pediatric trauma and assess the use of intranasal medications for these patients
- **Michael Gooch, RN**, will determine options for pain management, including drug-based therapies and non-pharmacologic interventions
- **David Foster III, MLS, EMT-P** will diagnose perplexing pediatric presentations by going beyond the textbook assessment to examine subtle signs and symptoms

Instructor Extension Cards Continue to Be Distributed; 7th Ed. Release Delayed

The release of the 7th edition ITLS provider manual has been pushed back from August to fall 2011. A final publication date has not yet been announced.

As a result the ITLS Illinois Advisory Committee decided at its March meeting that Illinois coordinators should continue to teach from the 6th edition provider manual through the end of the year. This allows additional time for instructor update/refresher courses to be scheduled.

No instructor update/refresher courses will be required until the new manual and teaching materials are available. Instructors should anticipate taking an update course in 2012.

Since most ITLS instructors' status has or will expire in 2011, the Chapter is issuing and mailing renewal/extension cards to instructors as their current cards ex-

pire, provided they have met the requirement of teaching 3 times in the 3-year certification period.

Through the Course Management System (CMS), ITLS Illinois is able to check faculty data and a history of the courses each faculty member is linked to. If instructors have not met their teaching requirements by the time their card expires, their renewal card will be on hold.

ITLS Illinois will announce more information about Instructor Update options and the current instructor renewal/extension cards after the next Advisory Committee meeting in September.

If you have questions about this process or have not received a renewal/extension card and your card has already expired, please contact ITLS Illinois Chapter Coordinator Sue McDonough at 630-495-6400, ext. 201, or suem@icep.org

Notes from ITLS Illinois: Quick News

BOOK PRICE INCREASE

Pearson announced a price increase on the 6th Edition ITLS for Prehospital Care Providers manual that went into effect May 1. As a result, the book price has increased by \$2.

The manual now costs \$52 for ITLS Illinois customers making their purchase through ITRAUMAIL.org or calling ICEP at 630.495.6400, ext. 213.

POLICY & PROCEDURE MANUAL REVISION

The ITLS Illinois Advisory Committee is at work revising the Chapter Policy & Procedure Manual. The revision is expected to be completed and made available to ITLS Illinois instructors and coordinators this fall.

Watch your email for details about the release date and how to access the manual after its release.

Find Us On Facebook: ITLS Builds Global Community on Social Networking Site

ITLS is building a global Facebook community one fan at a time. ITLS International launched its Facebook page in January and has watched its tally of fans grow slowly but steadily since.

To find ITLS on Facebook, log on to www.facebook.com/ITLSTrauma or search "International Trauma Life Support" on Facebook. Be sure to "like" us to get our status updates on your news feed.



International Trauma Life Support on Facebook

Like 356

ITLS's goal is to connect with as many chapters as possible through the social networking site, creating another portal for ITLS providers, instructors, and coordinators to network and share information. ITLS encourages everyone to write on ITLS's Facebook wall, post photos from an event, and

share links. The ITLS Facebook page links to any ITLS chapter Facebook page that has an option to "Like" it. (Because ITLS is set up as an organization, it cannot join other ITLS Facebook groups or request Friend status.)

ITLS Illinois will be creating its own chapter Facebook page later this summer. Watch your email for an announcement of this page as well!

Provider Bridge Course Closes Critical Gap for EMS Systems

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these areas. Time spent reviewing information in these topic areas that is common to both courses should be limited to that information needed to make the lecture/discussion flow smoothly.

Informational sheets were developed for each of these lectures which highlighted the information we felt must be covered during the presentation of these topics. These informational sheets can be obtained from Sue McDonough at the ITLS office (suem@icep.org).

Since patient assessment is not stressed as strongly in the PHTLS course and is so important to the ITLS course, the Provider Bridge Course has a Patient Assessment lecture and two patient assessment skills stations for practice. These practice stations must be given priority to help the participants understand how important their assessment ability is to the patient and ITLS.

The other two stations included in the agenda include Airway and Chest Decompression / Fluid Management / IO. These stations should be used to help review information presented in the Airway and Shock lectures, introduce skills that may not have been covered in PHTLS and provide practice for these often low-volume/high-risks skills. Intubation practice should be provided for each participant.

The course concludes with the ITLS written exam and the ITLS Patient Assessment Skills Evaluation (practical exam). Participants not able to successfully

complete the Provider Bridge Course will likely benefit most from taking the entire 2-day ITLS Provider course.

Critical to the Provider Bridge Course is the provision of an ITLS text to each provider in advance of the course. The ITLS text requirement is to provide participants with the information from the ITLS course that they can, and must, review in advance of the course, in order to learn the different terminology and concepts from ITLS.

Failure to provide participants with the text in advance is sure to prolong your lectures with questions from participants unfamiliar with the terms and concepts being presented. Additionally, failure to provide the text without sufficient time to review the material does not allow students to prepare in advance for the written exam.

The PHTLS to ITLS Provider Bridge Course can be a very useful tool to allow individuals who have taken PHTLS an opportunity to take ITLS without having to spend two whole days reviewing a lot of information common to both courses. In areas where the bridge course has been offered, instructors report that the Provider Bridge Course has been received very favorably and allows the introduction of an alternate program in areas previously teaching only PHTLS.

For the Agenda, Provider Bridge Course Policy and accompanying materials, contact Sue McDonough at the ITLS office.

Reviewing the Requirements for Planning an ITLS Course

Planning to run an ITLS course this fall or already looking ahead to course dates for 2012? Review these best practices for planning an ITLS course to ensure that your program runs smoothly from beginning to end.

Remember that the ITLS Coordinator & Instructor Guide (available for free download online by contacting Sue McDonough, ITLS Illinois Chapter Coordinator at suem@icep.org) contains a comprehensive checklist that guides you through each step of the course. For more tips, read on.

Becoming a Chapter Approved Course Coordinator

If you are an instructor who has become increasingly involved with ITLS and would like to begin coordinating courses, please keep in mind that the ITLS Illinois Policy and Procedure Manual offers guidelines and requirements. The Policy and Procedure Manual is available for download from ITRAUMail.org.

The Committee is developing an informal mentoring process for instructors seeking to transition to course coordinator status. It includes having an experienced coordinator work with the new coordinator on an initial course to guide them through the process and ensure they meet all of their responsibilities.

The first step to becoming an approved coordinator is to familiarize yourself with the responsibilities as outlined in the Illinois Policy and Procedure Manual. Then, contact Chapter Coordinator Sue McDonough at 630.495.6400, ext. 201 or suem@icep.org for further guidance and information.

the Illinois Chapter of International Trauma Life Support

phone 888.495.4237

fax 630.495.6404

www.itraumaLL.org



Upcoming ITLS Illinois Courses in 2011

For the most updated list of upcoming courses in ITLS Illinois or to find registration information for one of the below courses, please visit <http://cms.itrauma.org/CourseSearch.aspx>. You do not need to log in to access this page.

To return the most results, enter Illinois as the Chapter and leave other criteria fields blank. This will return all ITLS courses in Illinois currently entered into CMS.

If you need additional help, please contact Sue McDonough at suem@icep.org or 630-495-6400, ext. 201.

JULY 8-9, 2011
Combined Provider Course
Coordinator: Dale Tippett
Peoria Area EMS
Peoria, IL

JULY 12, 2011
Combined Provider Bridge
Coordinator: Dale Tippett
Peoria Area EMS
Peoria, IL

JULY 14, 2011
Advanced Provider Recert
Coordinator: Julie Childers
Litchfield Fire Station
Litchfield, IL

JULY 20-22, 2011
Combined Provider Course
Coordinator: Laura Ludford
Vista Medical Center West
Waukegan, IL

JULY 23-24, 2011
Combined Provider Course
Coordinator: Shelley Peelman
Provena Regional EMS
Champaign, IL

SEPTEMBER 16-17, 2011
Combined Provider Course
Coordinator: Jill Pendegrass
Memorial Hospital
Belleville, IL

SEPTEMBER 27, 2011
Combined Provider Bridge
Coordinator: Dale Tippett
Peoria Area EMS
Peoria, IL

SEPTEMBER 28-29, 2011
Combined Provider Course
Coordinator: Dale Tippett
Peoria Area EMS
Peoria, IL

NOVEMBER 8, 2011
Combined Provider Bridge
Coordinator: Dale Tippett
Peoria Area EMS
Peoria, IL