

Can You Make the Diagnosis?



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MD, FACEP**

A 62-year-old previously healthy male was struck by a slow-moving truck at 5 mph while riding his bicycle. He sustained brief LOC, was combative at the scene, and had obvious facial injuries consisting of left orbital swelling and ecchymosis, lower left facial swelling and tenderness including his mandible, blood from his left ear, and minor facial and tongue lacerations.

He was oxygenated with 15 liters BVM and his airway was being maintained by suctioning. His GCS was 7, with no response to eye opening, moans as a verbal response, and had extremity movement with motor response; however, 10 minutes after arrival, his GCS temporarily increased to 9 as his verbal improved to 4 with the patient providing his name, but then subsequently regressed back to 7.

The remainder of the primary survey is

unremarkable for immediate life-threatening injuries. At this point, what are your thoughts and considerations? Perform C-spine immobilization? Load and go? Consider RSI and intubation? Perform on-going assessment en route with early contact with Medical Control?

The answers to these questions, as all pre-hospital providers would attest, should be yes. The patient had full c-spine immobilization in the field and was a load-and-go. Medical control was contacted early and the trauma team was assembled in the emergency department. Definitive airway control in the field was considered, but with a short ETA and a Mallampati score of 3-4, the paramedics were concerned about the risk of successful intubation and elected to maintain the patient's airway with supplemental O2 and suctioning.

Upon arrival to the ER, the patient was noted to have a heart rate of 120, a BP of 120/90, a respiratory rate of 18, and an unchanged GCS of 7. His primary survey was unchanged in the ER. Rapid sequence induction and intubation was performed utilizing etomidate, rocuronium (a non-depolarizing paralytic agent), and glide scope laryngoscopy with in-line c-spine immobilization maintained.

Diagnostic workup included CT scans of head, c-spine, chest, abdomen/pelvis, and facial bones. The head CT noted a small left frontal epidural hematoma and cerebral contusion. CT of the cervical spine was unremarkable. The CT of the chest, abdo-

men, and pelvis was remarkable for a left clavicle fracture, multiple left rib fractures, a left scapula fracture, small pulmonary contusions, and possible left subclavian artery injury. The facial bone CT scan noted bilateral nasal bone fractures, medial and lateral wall orbital bone fractures, and zygomatic arch fractures consistent with a Le Fort III maxillofacial fracture (Fig. 1 and 2).

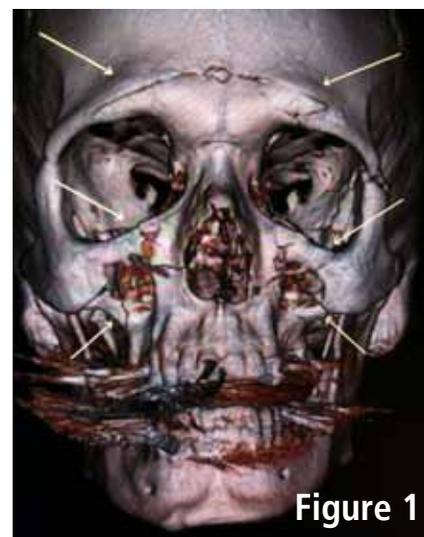


Figure 1



Figure 2

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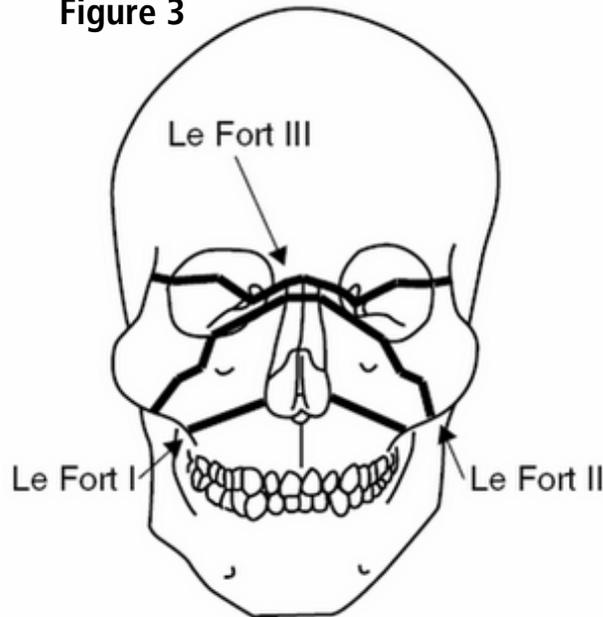
The patient ultimately was transferred to a Level I trauma center as he required further diagnostic workup for his possible subclavian artery injury as well as stabilization of his midface fractures.

Up to 60% of patients with severe facial injuries have multisystem trauma with the potential for airway compromise. Maxillary fractures account for 6-25% of all facial fractures with an impact of 100 times the force of gravity required to cause midface fractures. Typical mechanisms include MVCs, altercations, and falls.

Much of the understanding of predictable fracture patterns of the midface originate from Rene Le Fort in 1901 with his work on cadaver skulls that were subjected to blunt forces of various direction and magnitude.

A Le Fort I fracture (Fig. 3) is a horizontal maxillary fracture which is above the palate and below the zygomatic process, with motion of the hard palate but not the nose upon stress of the maxilla. (Note: the provider should not attempt to determine if the

Figure 3



maxilla is mobile as the cervical spine could be compromised. Attention to the airway and c-spine immobilization is the priority.)

A Le Fort II fracture (Fig. 3) is a pyramidal fracture with vertical fractures extending through the maxillary sinuses and infra-orbital rims bilaterally across the nasal bridge. Clinically, the entire midface will be swollen, and blood is often within the nares. Also, there may be rhinorrhea, otorrhea, and subconjunctival eye hemorrhages. With stress, there will be motion of the hard pal-

ate and nose but not the eyes.

A Le Fort III fracture (Fig. 3) is defined as craniofacial disjunction, or fractures involving the frontozygomatic sutures and across the bilateral orbits through the base of the nose. Clinically there may be CSF rhinorrhea. Only the posterior molars will occlude and the face has a "dishface" deformity. The entire face, including most of both orbits, will shift with mobilization.

These catastrophic injuries often require aggressive airway control and frequent intubation. Look for associated injuries, especially intracranial, spinal and abdominal due to the great force that occurs to cause these fractures. Visual assessment is also important due to the associated orbital fractures. Patients with complex maxillary fractures require admission for surgical stabilization as well as for the often associated multiple injuries.

(Author's note: This was an actual case with the content condensed and modified for education and discussion purposes.)

— Art Proust, MD, FACEP
ITLS Illinois Chapter Medical Director

ITLS Instructor Course Slides Updated to 7th Edition, Ready for Download

The revised and updated ITLS Instructor Course slide set is now available and ready for use!

This PowerPoint should be used at all ITLS Instructor courses. It provides an organizational overview, important information about ITLS policies and procedures, helpful tips for becoming a better instructor, and more!

To obtain this file, please contact ITLS Chapter Coordinator Sue McDonough at suem@icep.org or 630.495.6400, ext. 201.

If you were previously using a draft version of the slides, please discard the draft and begin using the final version immediately. Many changes have been made!



Revised 7e Post-Tests Now Available

Based on input from chapter and course coordinators, the ITLS Editorial Board has revised the 7th edition ITLS post-tests and Version 2 is now available. While Version 2 is referenced to the 7e text, other aspects of the validation process are being pursued.

A revised Annotated Answer Key that includes page references for all exam questions is in the works and will be available soon.

All ITLS Provider courses going forward should use Version 2 post-tests. The original post-tests should be discarded.

If you need the revised post-tests, please contact ITLS Chapter Coordinator Sue McDonough at suem@icep.org or 630.495.6400, ext. 201, to request them.

The Illinois Chapter has also been selected by the Editorial Board as one of the Chapters to provide feedback on the Version 2 post-tests. Course coordinators are asked to scan and send copies of their Provider course score sheets to Sue McDonough for all courses using the Version 2 post-tests that are run through November 1. When sending your students' score sheets, please

be sure to note which test (Advanced or Basic) each score sheet is for.

Patient Assessment Gradesheet

A minor change was also made to the Patient Assessment Scenario Gradesheet earlier this spring. The revised version adds a note about CABG in the event of major bleeding. This change may be found under the General Impression section of the gradesheet. The revised version can be found in the Instructor Guide on Pages 133-134. If your gradesheet does not reference CABG, please redownload the Instructor Guide.

ITLS-PHTLS Comparison Highlights 2 Programs' Similarities, Differences

The ITLS Editorial Board has developed a side-by-side comparison tool to show the differences and similarities between ITLS and PHTLS.

The comparison is useful when introducing the ITLS program to individuals unfamiliar with prehospital trauma certification programs as well as to individuals who are familiar with PHTLS certification.

The document analyzes two aspects of the program: courses and textbook. Core program content and tenets are incorporated into both sections of the document. Each section also looks at practical concerns, such as how courses are run and how textbooks are organized.

These two most internationally recognized prehospital trauma training programs have launched their 7th edition texts, used for training. Both are evidence-based meth-

odologies with the textbooks referenced to position papers. Both have recognized the need for e-learning dedicated to busy clinicians and e-learning modules were launched with the previous 6th edition texts.

ITLS training is available in over 80 chapters and training centres around the world and PHTLS in 52 countries worldwide.

Other key differences include the treatment algorithms and their components, the preferred mechanisms for identifying possible injuries, and the ways in which specialized patient care concerns (for example, for pediatric patients or military scenarios) are disseminated.

To request the ITLS-PHTLS Side-by-Side Comparison Tool, please contact Sue McDonough at suem@icep.org or 630.495.6400, ext. 201.

Reminder to Complete 7e Instructor Update Online

If you are a current ITLS Illinois Instructor and have not yet completed the 7th Edition Instructor Update Online, please register for and complete this short program as soon as possible. The deadline for all Illinois instructor was March 31, 2012.

You are not eligible to teach from the 7th edition ITLS Provider textbook until you have completed the update.

To date, nearly 275 instructors in Illinois have completed the program. This is the largest amount from a single chapter.

If you need to take the program, visit: ITRAUMA.org/resources and follow the link to Register for 7th Edition Instructor Update Online Now. The cost to register is \$25.

Online Registration, Brochure Available for 2012 Trauma Conference in Florida

ITLS invites you to join us at *Walt Disney World®* Resort in Florida as we celebrate 30 years of trauma care excellence with EMS professionals from around the globe.

The 2012 International Trauma Conference will begin with the Welcoming Reception on the evening of Friday, November 9. The two-day conference will be Saturday and Sunday, November 10-11.

Preconference workshops and special events like the annual ITLS Competition will be held all day Friday, November 9.

A special conference social event has been planned at Disney's EPCOT on Saturday evening. Attendees and their guests are invited to a 30th anniversary party dessert reception, where they will watch EPCOT's Illuminations: Reflections of Earth fireworks show. This event is included in conference registrations for attendees. (Tickets for guests must be purchased separately.)

This year, based on training in 2010-2011, ITLS Illinois has been allocated 9 delegates to represent the chapter in the Business Sessions. Last year, ITLS Illinois was well represented at the conference with a dozen instructors and providers. We hope more will join us in November to celebrate 30 years of ITLS trauma care!

Travel & Accommodations

The ITLS conference hotel is the Hilton at the *Walt Disney World®* Resort, located



within the resort property, directly across the street and just steps away from Downtown Disney®. The hotel offers complimentary shuttle services to the Disney Theme Parks and is the only Hilton property in the *Walt Disney World®* Resort to qualify for the Extra Magic Hours Benefit: Each day, one of the Disney Theme Parks opens an hour early or stays open up to three hours later so guests at the Hilton have the opportunity to get extra time at the parks with shorter lines and fewer crowds.

The special ITLS room rate of \$139 per night plus all applicable taxes includes complimentary wireless Internet in guest rooms, a reduced self-parking rate, and a waived resort fee. The cut-off date for this rate is October 15, 2012. Make reserva-

tions online at ITRAUMA.org/disneyhilton or use group code ILS when making your reservation by phone at 407-827-4000 or 1-800-445-8667.

Ready to buy Disney tickets? Mixing business with pleasure is easy when you make the most of your free time with Disney's Special Meeting/Convention Theme Park Tickets. Order your Disney Theme Park tickets in advance through ITLS at a special rate! "After 2 p.m." and "After 4 p.m." tickets are available. Specially Priced Meeting/Convention Multi-Day Tickets with a variety of options (including Park Hopper) are also available. Order online now at ITRAUMA.org/conference or call 407-566-5600 to order by phone.

All specially priced advance purchase Meeting/Convention Theme Park Ticket orders must be placed by November 7, 2012.

Educational Preview

The 2012 conference mixes lectures from original ITLS authors Ray Fowler and founder and president John Campbell with dynamic new voices in trauma care. Here's just a sampling of the educational sessions on the agenda for 2012:

- JEMS humor columnist Steve Berry presenting his signature blend of humor, compassion and solid education with lectures on home improvement injuries, the challenges of the deaf patient, and finding humor in the crazy world of EMS

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Call for 2012 Conference Submissions

2012 Trauma Case of the Year Showcase Seeks Applications

- Have you had a call that you will remember the rest of your life?
- Have you had a call which will change your practice?
- Have you had a call you want to share with your colleagues?

If you can answer YES to any of the above questions, ITLS wants to hear from you!

International Trauma Life Support needs your help to bring a clinical showcase of the most challenging and unusual true-life trauma cases to the International Trauma Conference at *Walt Disney World*® Resort Florida on November 8-11, 2012!

The ITLS Trauma Case of the Year Showcase on Saturday, November 11 will present the top four abstracts submitted from ITLS providers worldwide. The selected authors will review their cases in scientific detail from

scene to surgical outcome with a focus on how the ITLS assessment and management priorities on-scene affected patient outcome.

If you have a trauma case that you think makes the cut as one of the year's best, submit an abstract to be considered. Your submission should be a first-hand, real-world trauma case that uses the ITLS assessment framework and has a strong clinical component.

All submissions must be from a certified ITLS Provider or Instructor. Cases must be a real-life firsthand experience of the author/presenter.

The deadline for submission of abstracts is Monday, September 10, 2012.

Abstracts must conform to the stated ITLS Abstract Requirements in order to be considered. Please refer to the rules in the document before submitting your abstract. [Download Rules & Submission Form](#)

Call for Competition Teams

ITLS is accepting applications for teams to compete in the annual ITLS Competition that will be held during the International Trauma Conference at Walt Disney World® Resort Florida.

The competition will be held Friday, November 9, 2012. All teams will complete 3 scenarios. The team with the highest cumulative score will be the winner. **All competitors must be available from 8:00 AM to 4:30 PM Friday.**

Each team should consist of three members and one alternate. All team members are required to be current ITLS-certified providers or instructors, and all team members are required to be registered for the conference.

Space is limited. Teams will be accepted on a first-come, first-served basis.

[Download Application](#)

Preview of 2012 Conference

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- ITLS founder and president Dr. John Campbell exploring the history of ITLS with a focus on assessing the growth, change, and refinement to the program over the past 30 years
- Leading capnography expert Bob Page presenting real cases and research that define the clinical applications for capnography, including tips for teaching the technology at ITLS courses.
- A behind-the-scenes look at the world's largest theme park and resort to discover the challenges that face the EMS providers who respond to the park's incidents and injuries.
- Dr. Ray Fowler, one of the original authors

of the BTLS manual, evaluating airway management techniques and advancing new concepts in resuscitation

Preconference Workshops

The 2012 ITLS conference features several workshop opportunities for participants looking for extra education. Choose from:

- ITLS Pediatric Provider course
- Critical Ultrasound for Prehospital Trauma Management: This hands-on course for advanced providers demonstrates the integration of point-of-care image acquisition and interpretation with life support protocols, such as ITLS or ATLS, that follow an "ABCDE" or "head-to-toes" approach.

- Trauma Scenario Simulation Lab: This hands-on workshop lets you practice your real-world responses to realistic trauma scenarios on state-of-the-art simulation equipment. The focus on airway management and chest trauma is relevant and useful to all levels of EMS providers.

Registration for the 2012 ITLS International Trauma Conference is now open online at www.regonline.com/2012ITLSTrauma. If you prefer to register by phone, call ITLS at 888-495-4857 or 630-495-6442. Don't forget to register before the early bird cut-off deadline of September 28 to lock in the lowest registration costs.

ILLINOIS ITLS *news*

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ITLS

International Trauma Life Support
ILLINOIS

2012 Advisory Committee Dates

The ITLS Illinois Advisory Committee has two upcoming meetings remaining in 2012. As a reminder, all Affiliate Faculty are **required** to attend one meeting per year. Attendance at additional meetings is optional.

FRIDAY, SEPTEMBER 14, 2012

Memorial Hospital, Belleville
(Videoconferencing at ICEP, Downers Grove, and Illinois Central College, Peoria)

WEDNESDAY, DECEMBER 12, 2012

ICEP Office, Downers Grove
(Videoconferencing at Memorial Hospital, Belleville, and Illinois Central College, Peoria)

Videoconference locations subject to change.

Upcoming ITLS Illinois Courses in 2012

For the most updated list of upcoming courses in ITLS Illinois, including registration information, 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 Chapter Coordinator Sue McDonough at suem@icep.org or 630-495-6400, ext. 201.

Here are a few upcoming courses in Illinois:

AUGUST 15-16, 2012

Combined Provider Course

Coordinator: Bill Wood
St. Mary's Hospital
Decatur, IL

AUGUST 24, 2012

Combined Instructor Course

Coordinator: Tony Cellitti
Rockford Health System EMS
Rockford, IL

AUGUST 25-26, 2012

Combined Provider Bridge

Coordinator: Tony Cellitti
Galena Area EMS
Galena, IL

SEPTEMBER 4, 2012

Combined Provider Bridge

Coordinator: Dale Tippett
Peoria Area EMS
Peoria, IL

SEPTEMBER 5-6, 2012

Combined Provider Course

Coordinator: Dale Tippett
Peoria Area EMS
Peoria, IL

SEPTEMBER 21-22, 2012

Combined Provider Course

Coordinator: Jill Pendegrass
Memorial Hospital
Belleville, IL

SEPTEMBER 29, 2012

Combined Provider Recert

Coordinator: Jill Pendegrass
Alton Memorial Hospital EMS
East Alton, IL

OCTOBER 5, 2012

Combined Provider Recert

Coordinator: Shelley Peelman
Provena Regional EMS
Champaign, IL