

***EMS IS LIKE A
BOX OF CHOCOLATES...***

***You Never Know What
You're Gonna Get !!***

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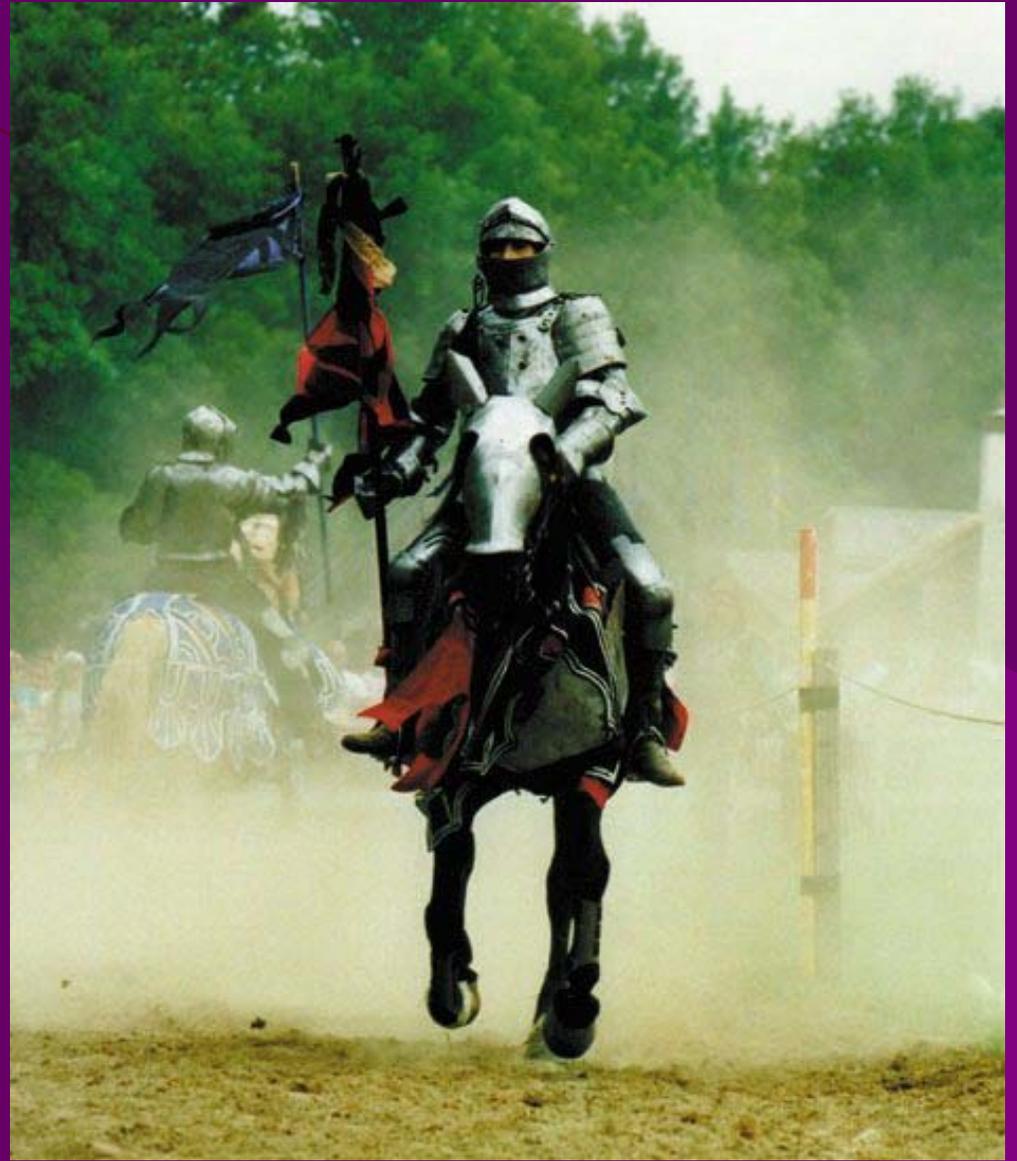
Denver, Colorado



**Momma always said,
“Life (EMS)
is like a
box
of chocolates,
you never know
what you’re going to get”**



First Box



CASE PRESENTATION

- Prehospital Scene
- Single vehicle MVA
 - 24 yo male passenger in a moderate to high speed MVA. The car apparently lost control on a dirt road while going around a curve. Vehicle hit a heavy wooden split rail fence.

Prehospital Scene (cont.)

- Driver:
 - Dead at the scene from head and multiple traumatic injuries.
- 3 Back Seat Passengers:
 - No injuries, moderate ETOH . Refused treatment, “released” at the scene.
- Front seat passenger
 - Severe injuries, multiple trauma.



Responders

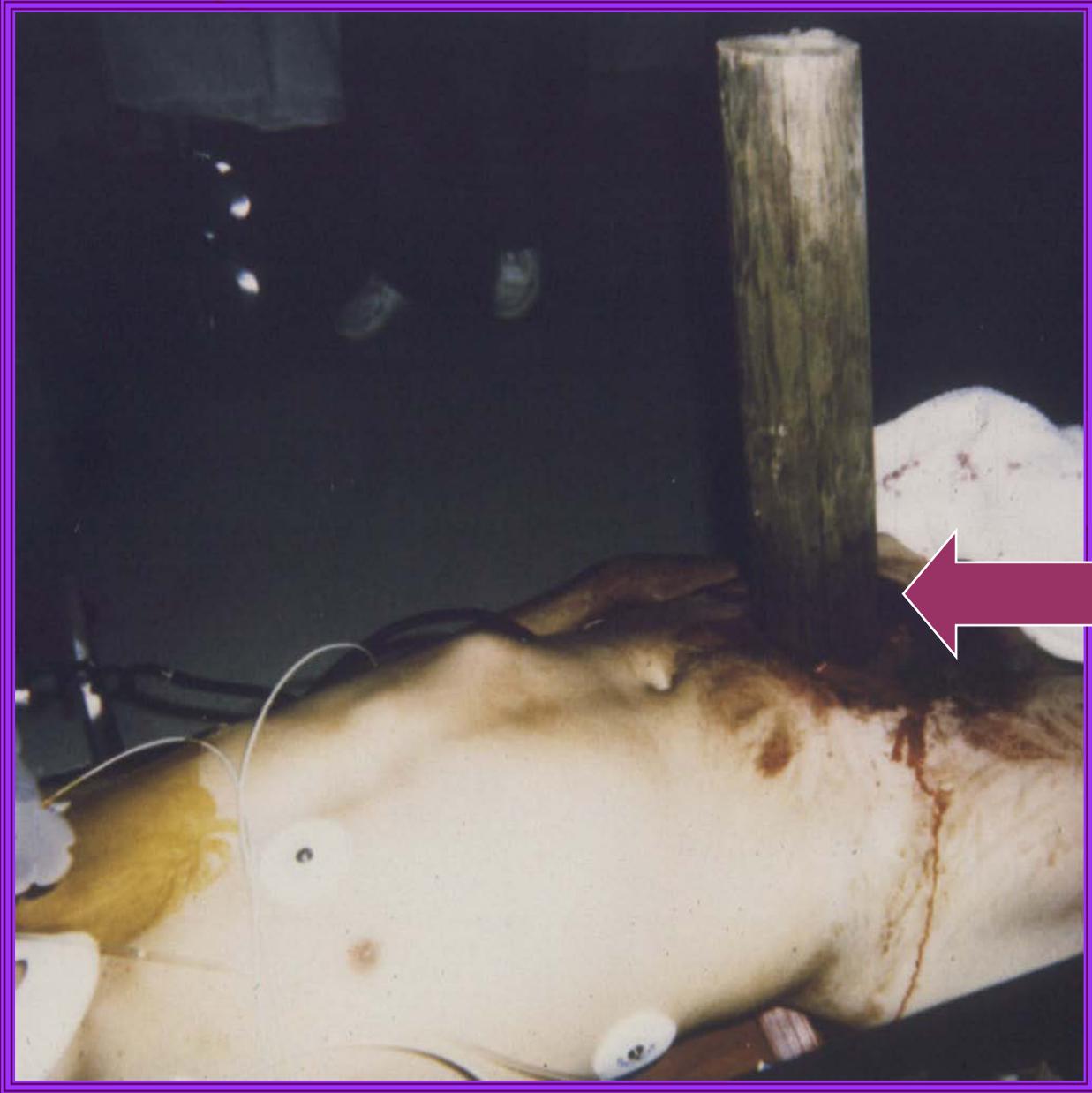
- Within a few minutes - Good Samaritan paramedic and nurse
- 10-15 mins - Brush truck (non-EMS) with EMT and first aide/CPR
- 35 mins - Paramedic/EMT ambulance
- 40 mins - Helicopter with RN x2

Prehospital Assessment

(Good Samaritan paramedic and nurse)

- Front seat passenger
 - Wooden post with entrance through the fire wall of the vehicle. Pt. impaled through lower abdomen, exit (R) buttock area. Post through and through seat cushion.





Prehospital Assessment

(Brush truck with EMT/first aid)

- Extrication:
 - Pt. removed from car and placed on BB with c-collar.
- Initial Assessment:
 - AAOx2. Aware of condition. ABCs intact. Strong radial pulse. MOEx3, - (R) leg. Mod. bleeding around wound.

Prehospital Management

- Airway: R=36, 100% O₂, non-rebreather mask.
- Breathing: BS clear, equal, shallow but good expansion.
- Circulation: BP=104/P, P=118, strong pulses x4.

Prehospital Management

(Paramedic and EMT ambulance)

- Secondary: No additional obvious trauma.
- Additional spinal precautions.
- IV x1, 14 g (L)AC
- Dressings packed around wound.

Prehospital Management

(Pilot and RN x 2)

- Helicopter arrived for transport to trauma center.
- Second IV started
- Patient restrained
- Medications
 - Fentanyl and versed
- Total Scene time: approx. 55 mins



Hospital Course

- ED Management: Trauma team diverted directed to OR.
- OR Management: Intubation, removal of the post and debridement of wound.
 - Placement of ostomies and drainage tubes.
 - No closure or repairs.

Hospital Course (cont.)

- Floor Management: Pt. remained in hospital for several weeks. Surgery to close wound.
 - Some repair and reconstruction of organs completed.
- Rehabilitation: Pt. transfer to long term care for physical rehab. and numerous reconstructive surgeries.

LESSONS TO LEARN:

**BRINGS A WHOLE NEW
MEANING TO THE
EXPRESSION ...
“HE IS SUCH A STUD” !!**

Second Box



CASE PRESENTATION

- Prehospital Scene
- Industrial accident
 - 28 yo male working at a rural industrial factory. Explosion occurred for an unknown reason. Pt. working with detonation devices for automobile airbags.

Prehospital Scene (cont.)

- No local EMS or Fire agency initially called.
- Flight nurses (x2) arrived on scene approx. 23 mins. after call received by dispatch.
- Pt. found inside factory area. No fire or structural hazards.

Prehospital Assessment

- Flight Nurse Assessment:
 - 28 yo male working with “robotic” arms at a copper machine. Per other workers, pt. wearing turnout coat, safety glasses and face shield. All items but coat were “blown off”.
 - Non-English speaking. Unknown if LOC.

Prehospital Assessment

(cont.)

- Initial Assessment:
 - AAOx3. C/o pain to face and arm.
 - Burns to (R) side of face. Multiple open shrapnel type wounds, including (L) lateral neck, upper arm and nose. Powder burns around wounds.
 - Minimal bleeding.



Prehospital Assessment

(cont.)

- Airway: R=24, 100% O₂ by non-rebreather mask, not tolerated well.
- Breathing: BS clear, equal, labored due to pain.
- Circulation: BP=122/P, P=92, NSR, strong radial pulses.

Prehospital Assessment

(cont.)

- Secondary: No resp. distress, able to speak without difficulty.
- 2°-3° burns to face, neck, and small areas of chest and arm.
- 5 cm avulsion with powder burns on (R) arm.

Prehospital Assessment

(cont.)

- Shrapnel palpated in nose and lateral neck.
- Identified shrapnel as detonator possibly containing *“highly”* explosive ZPP. *Unknown* if active or in active.
- MSDS provided.

Prehospital Management

- Airway: NRB mask, maintain open airway.
- IV x 2, 14 g with NS
- C-Spine precautions
- Fentanyl- 50 mcg x 2, IV
- Versed- 1 mg, IV
- Water-gel^R dressings

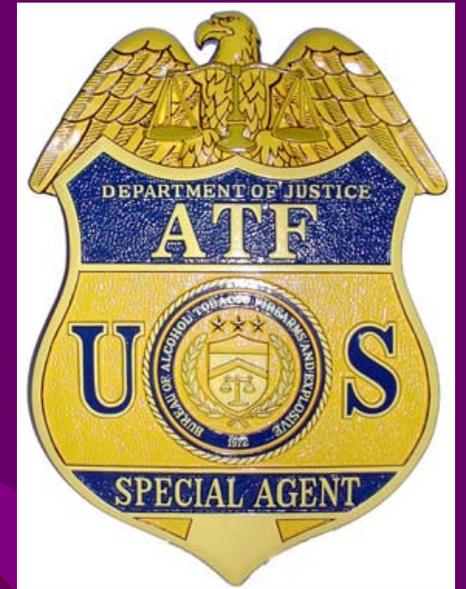


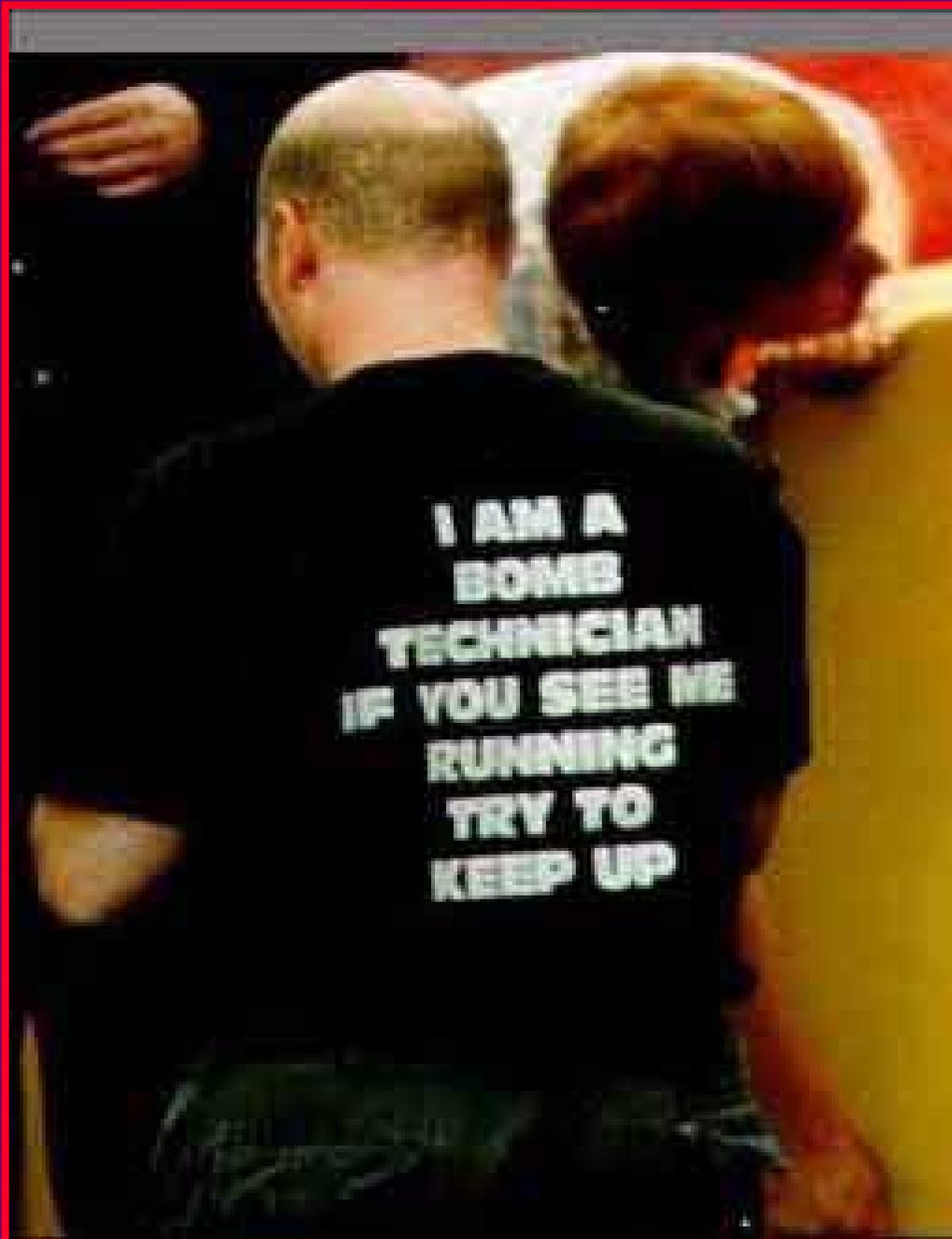
Hospital Course

- ED Management
 - RSI with 8.0 ETT
 - Trauma/burn consult
 - Multiple x-rays, baseline labs
- Transfer to the OR for exploration and possible removal of devices.









Hospital Course (cont.)

- OR Management:
 - Law enforcement present in OR.
 - Simple debridement and closure of neck and arm injuries.
 - Underwater surgical procedure for nasal shrapnel.



Hospital Course (cont.)

- Floor Management:
 - Routine wound care and burn care for partial thickness burns to face, arm and chest.
- Discharge: LOS- 3 days
- Follow-up: Pt. to f/u in trauma/burn clinic in 1 week.
- Investigation:

LESSONS TO LEARN:

**AIRBAGS ALONE MAY
BE HAZARDOUS TO
YOUR HEALTH.**

***ALWAYS WEAR YOUR
SEAT BELT!***



Third Box

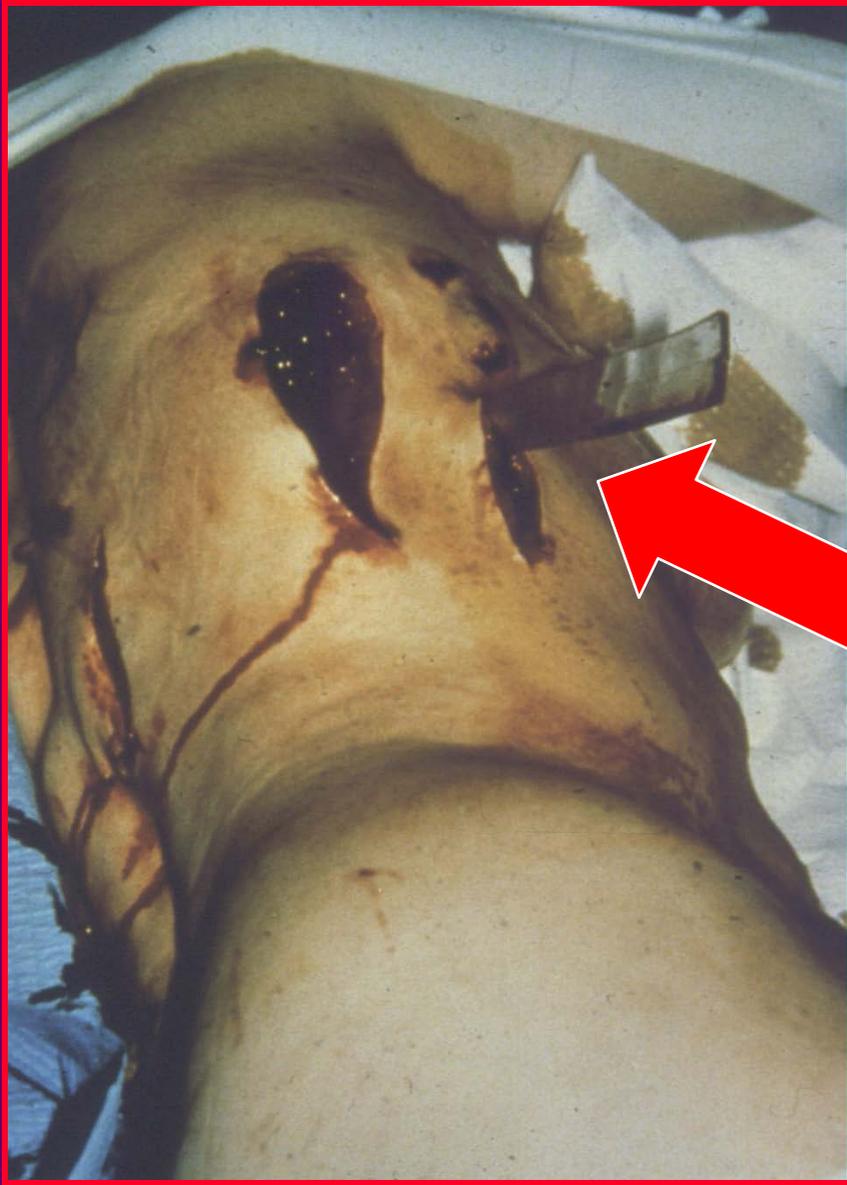
Initial Assessment

- FD called to private residence for “woman who fell in shower”. Fell through a glass shower door.
 - No LOC; CAO x 4
 - Extreme pallor
 - Moderate respiratory distress
 - Obvious, significant blood loss
 - Palpable peripheral pulses

Focused Assessment

- 6 large lacerations
- 1 piece of glass impaled into R chest, midaxillary line
- Husband reported removing others. Tried to remove remaining piece, reported it was “stuck”.
- Decreased breath sounds on R
- 110, 130/90, 32 shallow





Prehospital Intervention

- High flow oxygen
- Stabilization of glass using Kerlix
- Immediate preparation for transport



Prehospital Intervention

- Closure of chest wounds with cellophane wrap
- Spinal immobilization on L side
- Enroute
 - 2 IV NS via 16 gauge IVs
 - Onscene - 9 minutes
 - Transport to Trauma Center -14 minutes.

Ongoing Assessment

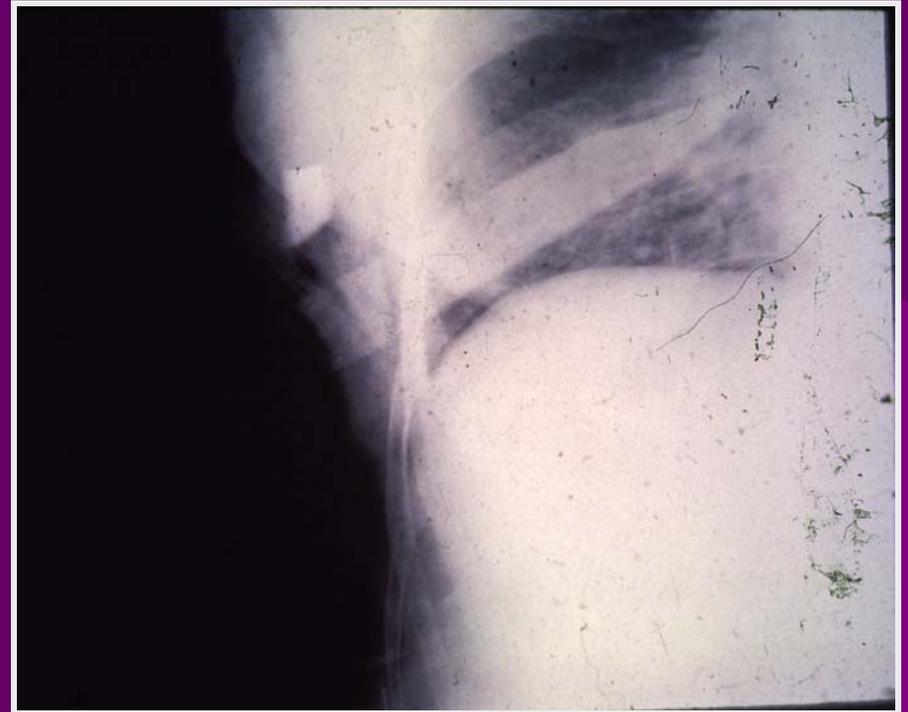
- Enroute the hospital the patient became confused and the BP dropped. In response:
 - Opened chest dressings with no change
 - Infused total of 1100 cc of NS
 - Reassessed airway/breathing status
- Following these interventions, BP improved slightly but mentation remained unchanged.

ED Assessment

- Conscious, confused, pale
- Head/neck: Blood on lips
- Abdomen: normal
- Extremities: normal
- 132, 90/68, 32 labored, 37.7 C (oral)
- Chest: 6 large lacerations, R chest
 - Diminished BS R chest
 - Air bubbling in wounds
 - Normal cardiac sounds

ED Diagnostic Testing

- Lab
 - Hct: 34
 - Electrolytes: normal
- Radiology
 - Glass penetrating R chest just above diaphragm
 - Tip of glass resting on or in **pulmonary artery**



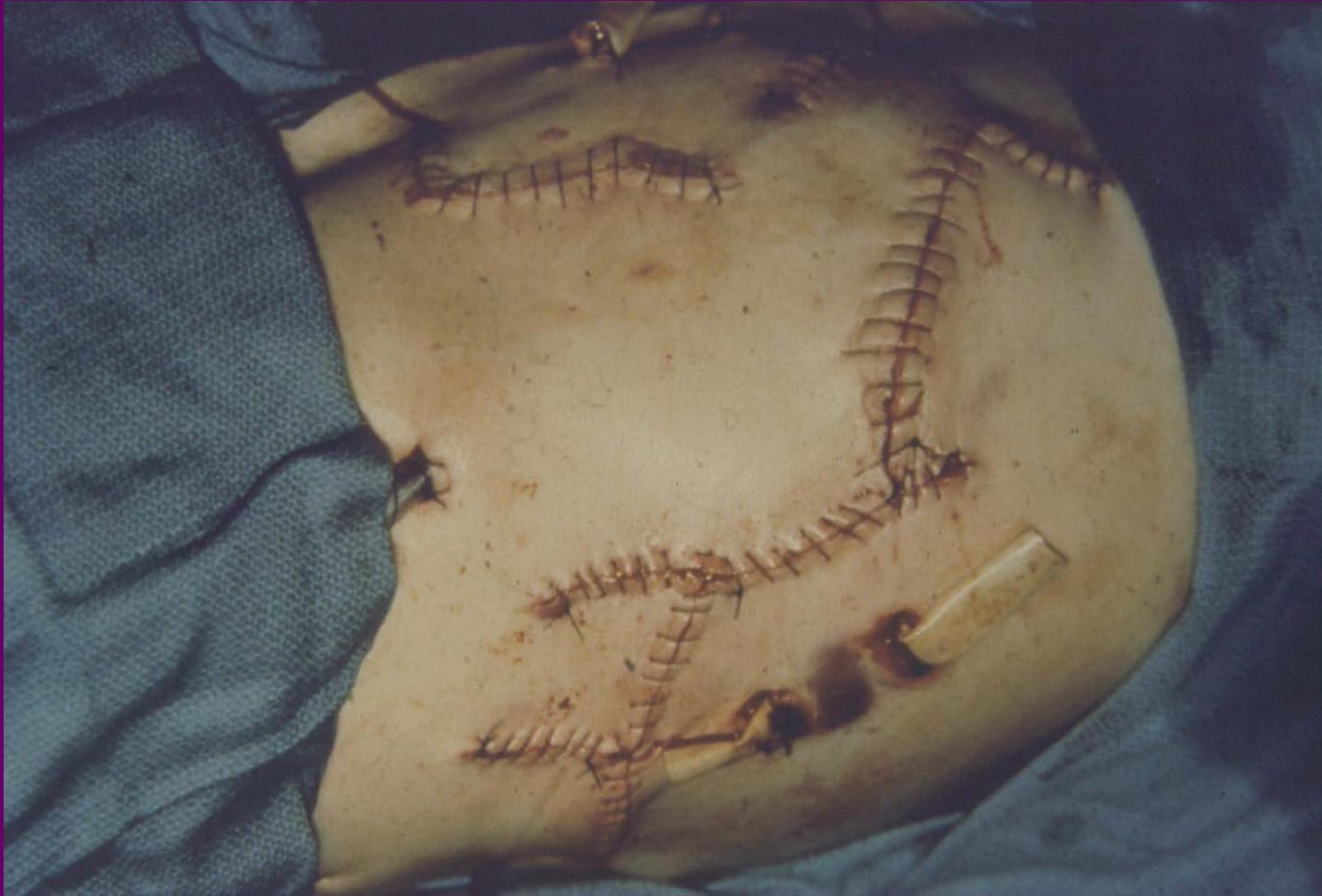
ED Intervention

- Immediately prepped for surgery
- Type & crossmatch
- 2 chest tubes inserted; immediate rush of 400 cc of blood
- Transported to OR 45 minutes after arriving in E.D.

Surgical Course

- Chest was opening prior to removing glass to enable the surgeon to palpate the location of the distal tip of the glass.
- Glass was resting **on** the pulmonary artery, with no apparent vascular damage.
- Glass was removed; it had penetrated 14” into the left chest.





Hospital Course

➤ ICU

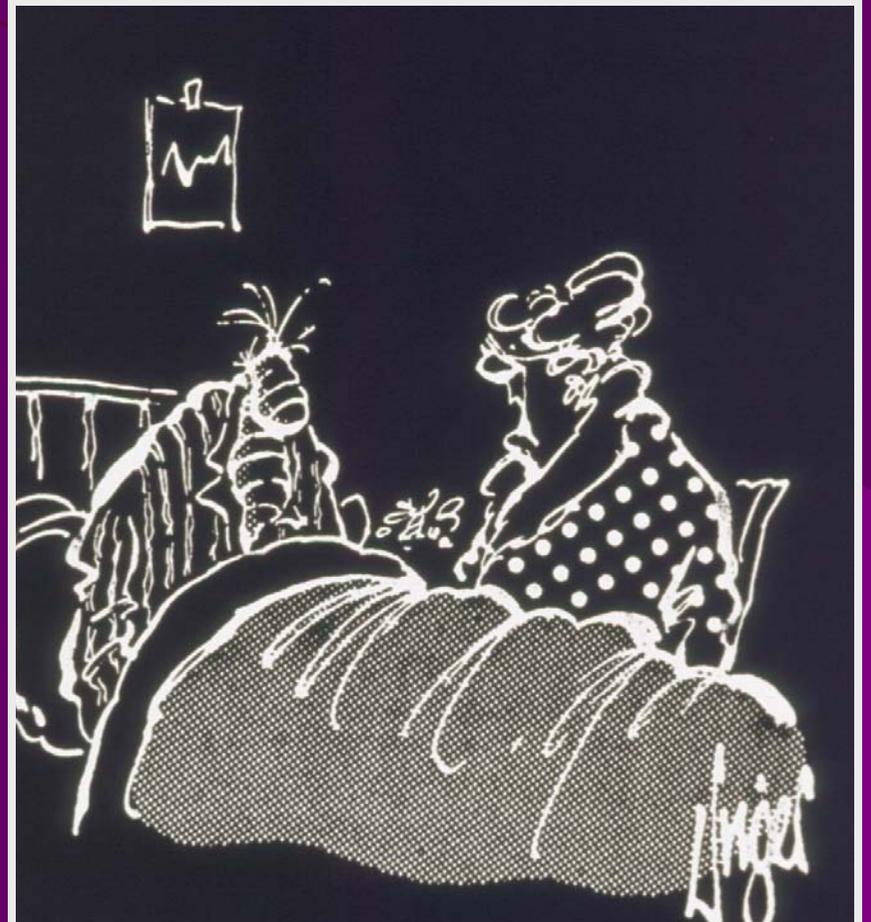
- Patient continued to bleed out chest tube
- Received additional unit of blood
- Chest tubes removed on 4th day
- Discharged to floor on 5th day

➤ Floor

- Developed pneumonia; placed on IV antibiotics
- Recovery went well
- Discharged from hospital 17 days after accident

LESSONS LEARNED:

**NEVER FLUSH
WHEN SOMEONE
ELSE IS IN THE
SHOWER !!**



**How was I supposed to know
you were in the shower ? !**

CONCLUSION

- Careful and complete scene assessment.
“IS IT SAFE ?”
- Time and planning on the front side may save lives on the backside.
- It’s not always about ALS, BLS saves lives.
- Be creative and think outside the box.
- Work as a team.

**Thank you
for
your time and attention**

**Marilyn Bourn
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God bless our service men and women