



# The Power of a Trauma System: Survival after Blunt Traumatic Arrest

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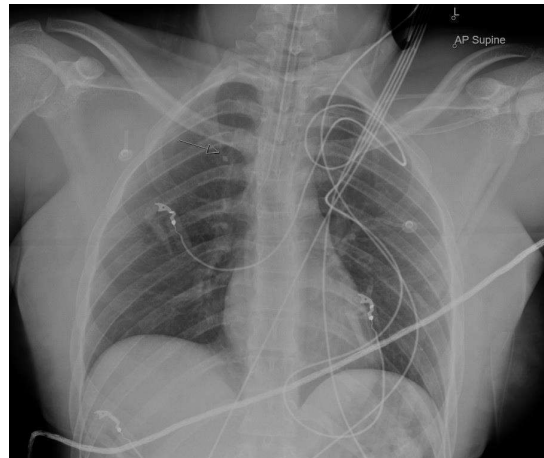
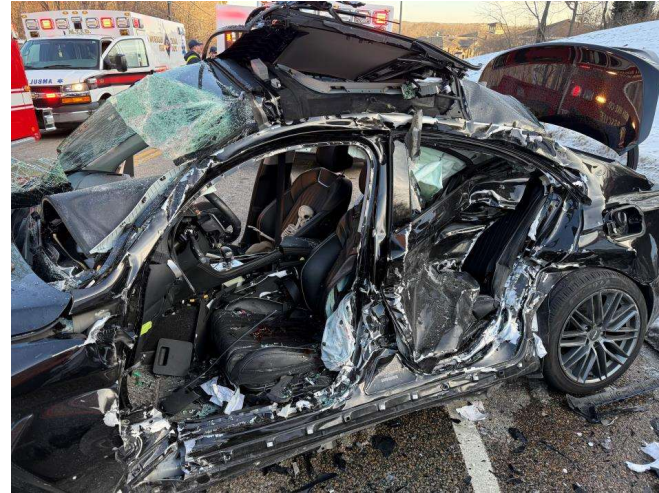
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# Level III: Primary Survey

23F restrained driver s/p MVC at highway speeds, + airbag deployment. Vehicle with significant intrusion requiring extraction.

- A: sonorous respiration
  - Intubated
- B: bilateral breath sounds
- C: weak radial pulse
  - FAST indeterminate
  - MTP activated
  - Pelvic binder applied
- D: GCS 3, pupils equal and responsive



# Level III: OR

- Patient became pulseless
- Resuscitative thoracotomy with aorta cross-clamp and ROSC
- Patient underwent laparotomy
  - No evidence of intra-abdominal hemorrhage
- Preperitoneal pelvic packing was performed
- Cross clamp removed
- Temporary abdominal closure device placed

## Transfer:

- Decision made to transfer patient to Level I trauma center for ongoing management of hemodynamic instability and complex pelvic fracture.

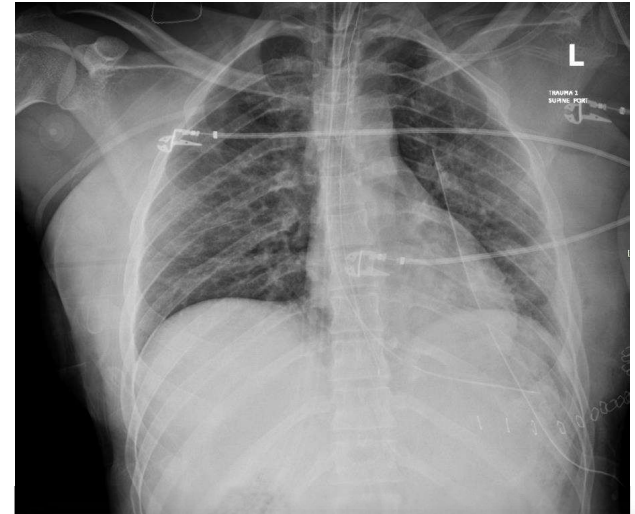
### **MTP Totals**

10	PRBCs
7	FFP
3	PLTs
1	Cryo
4g	CaCl
4	Bicarb
1g	TXA
500cc	Albumin

\*Lifestar to continue resuscitation with their 2 FFP, cooler of 4 PRBCs handed off to Lifestar

# Level I: Primary/Secondary Survey + IR

- A: intact
- B: bilateral breath sounds
- C: maintaining map > 65 without pressors
  - Pelvic binder removed
    - No doppler signal to right foot and significant venous bleeding from wounds
- Pt to **IR** for emergent control of hemorrhage
  - Pelvic angiography with no active extravasation from internal iliac vasculature
  - Small focus of extravasation noted in left corona mortis
  - Gelfoam embolization of bilateral anterior division of internal iliac arteries, caudal embolization of left inferior epigastric artery with occlusion of left corona mortise, and embolization of middle branch of the left profunda artery



# Level I: IR -> CT

## - CTA Head and Neck

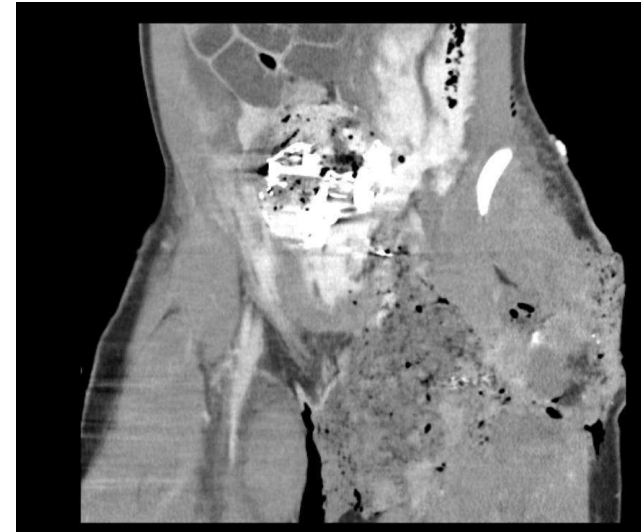
- Subarachnoid hemorrhage

## - CT Maxillofacial

- Left inferior orbital floor fracture involving infraorbital foramen
- Left periorbital edema, Mild left proptosis

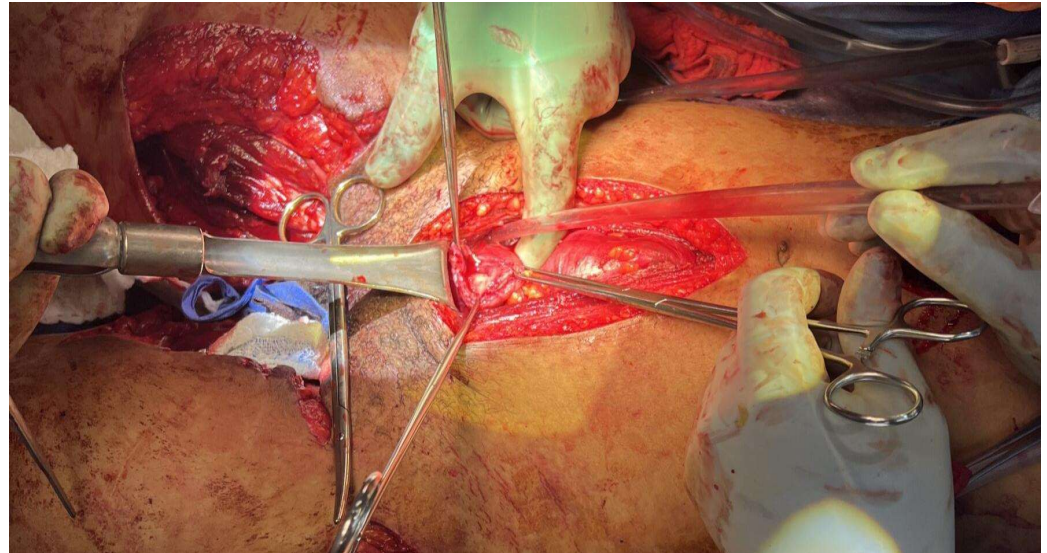
## - CTA Chest/Abdomen/Pelvis

- Left subclavian artery injury from cordis catheter
- Manubrium fracture with retrosternal hematoma
- Extra-peritoneal bladder rupture
- Bilateral superior/inferior pubic rami fractures
- Left acetabulum fracture
- Left sacral ala fracture extending into sacral foramina at S1 and left SI joint
- Left femoral head and neck fracture
- Right femur fracture
- Left femoral vein injury
- Bilateral fibular head fractures
- Three vessel runoff to bilateral feet



# Level I: CT -> OR

- Exploratory laparotomy, open bladder repair, temporary abdominal closure
- Bilateral lower extremity wound washout, left femoral vein injury repair, packing of thigh wounds
- Left wrist wound washout
- Bilateral femoral traction pinning

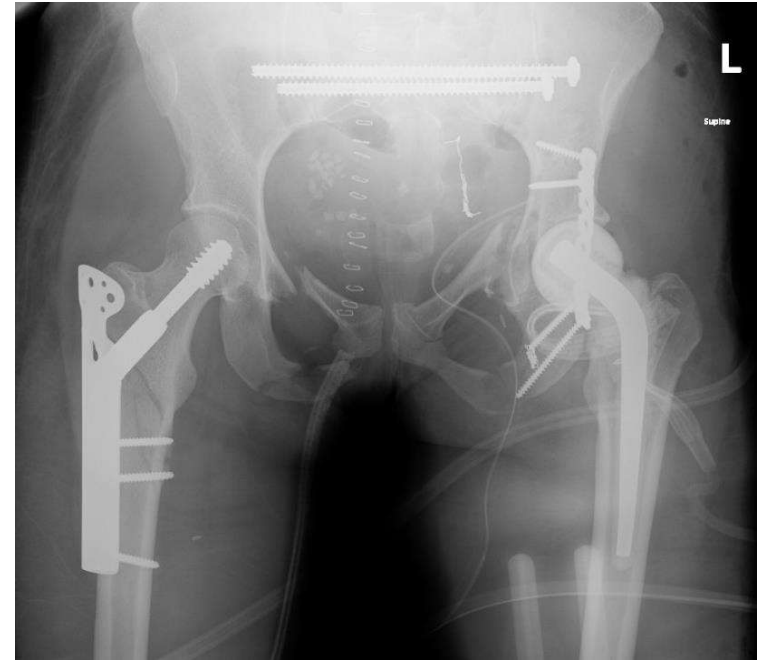


## Total Blood Transfusion:

- **Prior to HH** - 12 PRBC, 9 FFP, 3 PLT, 1 cryo, 4g Ca, 1g TXA
- **HH ED** - 3 WB 1g TXA
- **HH IR** - 5 PRBC, 3 FFP, 1 PLT
- **HH OR** - 3 PRBC, 2 FFP, 2g Ca

# Level I: Hospital Course

- POD1-26:
  - RTOR
    - LLE fasciotomies for LLE compartment syndrome
    - Exploratory laparotomy, abdominal washout and closure
    - Recurrent b/l LE washouts, debridements, VAC
    - IVC filter placement, cutdown and repair of left subclavian artery
    - B/l femur ORIF, Pelvic fixation
  - ICU
    - Left sided weakness, stat CT head with acute infarcts
  - All wounds healed without infection
- Discharged to LTACH
- 1 Year follow up
  - Lives at home, able to complete ADLs and back to work, ambulates independently and driving again



## Summary

- Initial presentation and survival benefit of transfer
- Damage control surgery for pelvic hemorrhage
- Sequencing of hemorrhage control, traumatic workup, and repair of injuries
- Multi-disciplinary care of the multiply injured patient with complex open pelvic, extremities, vascular injuries and wounds