Everything I do is Off-Label!

Just The Pearls

This is the ultimate lecture for the ADHD emergency physician.
&gt;20 Tips in 60 Minutes

You’re repeatin’ yourself...

½ Trauma ½ Medical Arrest

CRIT CARE IN THE TRAUMA BAY

Case

Donorcycle
Hypotensive in the Field

HR 96
BP 180/20
Sat 89% NC
RR 22
GCS 14 (-1 Eyes)
Moves Ext x 4

What do you think?

Ignore HR

Low or normal HRs are not on their own reassuring in sick trauma pts @emcrit
Ignore Initial Automated BPs

Don’t believe the 1st few BPs in sick trauma patients; check your rep time @emcrit

ETCO₂

Low=Badness

Rep Time

So, if you can’t trust the initial vitals…
Push on Belly
Squeeze Pelvis
Feel Feet

Pelvis Moves
Under Your Hands

Bind It!
Better than ExFix

Orthopods have nothing to offer the crashing trauma patient

Is Sheeting as Good?

Can you Make Things Worse?

Pelvic Binding: Early and Often @emcrit

50/30
Cavities
Mass Trans
Airway
Monitoring

Cavities:
Where's That
Bleed

Chest
Intra-P
Retro-P
Thigh
Street

Chest
Intra-P
Retro-P
Thigh
Street

Empiric
Chest Tubes
Finger Thoracostomy

200 ml Blood on L
Nothing on R
CT on Left

FAST

Chest Intra-P
Retro-P
Thigh Street

Liver Tip
with Patient in Trendelenberg
When the FAST really matters, RUQ Liver tip with Trend. is the money! @emcrit

Cavities
Mass Trans
Airway Monitoring

Mass Trans:
Hemostatic Resus

A few thoughts
PRBC/ Clotting Factors

1:1 vs. 1:2

PROPPR Trial

Type O PRBC
Thawed AB Plasma

Should be in the
Trauma Bay

Scores

>4 Units in the 1st Hour
ABC Score for Massive Transfusion

- Penetrating Mechanisms?
- ED Systolic BP < 90 mmHg?
- ED HR > 120?
- Positive Ultrasound FAST Exam?

LLS Score

TXA

Early Cryo

RoTEM/TEG Directed Care
The Rise of the Concentrates

Fluid Choices in Sick Trauma Patients

Warm

Under Pressure

Containing clotting factors or oxygen

Calcium
90/50 after 2 PRBC 2 FFP

Cavities Mass Trans Airway Monitoring

MEDs: Ketamine Rocuronium

Hypotensive intubation meds: high-dose roc, low-dose ketamine. @emcrit

Cavities Mass Trans Airway Monitoring

Femoral Arterial Line

Shock 40(6), December 2013, p 527-531
Ultrasound

CFA not the SFA

Yes, it's ok in a pelvic fx

MAP 48

Resus Goal?

Permissive Hypotension?
Minimal Normotension

MAP $\geq 65$
and perfusing

May be 50 very soon

$<65$
give the fluid of trauma

$>65$
eat away at the adrenals

Fentanyl
50-100mcg

J Trauma 2011;70:652
50 vs 65

J Trauma. 2002
Jun;52(6):1141-6
At 1 mg
pt is warm, perfusing & anesthetized

What about TBI?

Some would say SBP>90

We have a bedside test for Increased ICP

Ocular ultrasound is a bedside test for ICP elevations in trauma patients. @emcrit
Where should we go now?

OR vs. IR

We Shouldn't Have to Choose

RAPTOR

Resuscitation with Angiography, Percutaneous Techniques and Operative Repair

RAPTOR: we should not have to choose between IR and OR.
@emcrit
Resuscitative Endovascular Balloon Occlusion of the Aorta

From Megan Brenner

REBOA: vascular control without the big cut—coming to a trauma center near you. @emcrit

120/80
More fentanyl and to RAPTOR Suite for Angio
Review

Low or normal HRs are not on their own reassuring in sick trauma pts @emcrit

Don’t believe the 1st few BPs in sick trauma patients; check your rep time @emcrit

Pelvic Binding: Early and Often @emcrit

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THE NEW ARREST

Cookbook Medicine
Good CPR
Early Defib
Post-Arrest Cooling

Nihilism

ACLS

Truly Advanced Cardiac Life Support for Resuscitationists

WHERE WE'RE GOING, WE DON'T NEED ROADS.
Max Harry Weil

Disease-a-Month 1997

Airway

LMA

Convert to Tube ASAP

Video Laryngoscope + Bougie

Resuscitation. 2012 Aug;83(8):1025-30
Custom Bent Bonfils Fiberoptic Stylet

Breathing

ETCO$_2$

Hook them to the Ventilator
Set Peak Pressure Limit to > 100 cm H₂O

Set the rate low

Circulation

Quality Compressions

Metronome

What about depth?
STEMIs go to Lab; Even if Coding

Drugs

Epi

VSE?

Esmolol

Nitroprusside?

Emergency Department Use of Esmolol in Refractory Ventricular Fibrillation -- Driver, Plummer, Smith

Prolonged Adult Cardiac Arrest With Enhanced Cardiopulmonary Resuscitation and Sodium Nitroprusside Yannopoulos' Group

The PACA Trial: Jacobs et al Resuscitation. 2011;82(8):1138

JAMA. 2013;310(3):270

Arch Intern Med 2009;169(1):15

Circulation 2012;126(13):1605
Quiet

ECPR

Time to CPR and Premorbid State Matters

Time Coding doesn’t matter!
A time to **CHEER**

Nihilism

Cardiac Arrest Resuscitation by Resuscitationists

THE NEW ARREST