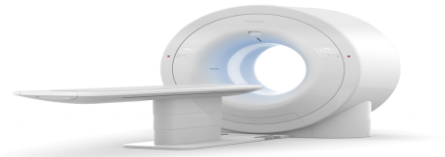
ER CAST LIVE

HIPPO EDUCATION

Emerald Coast ACEP 2024

Ovarian Torsion:

Should CT be the imaging test of choice?



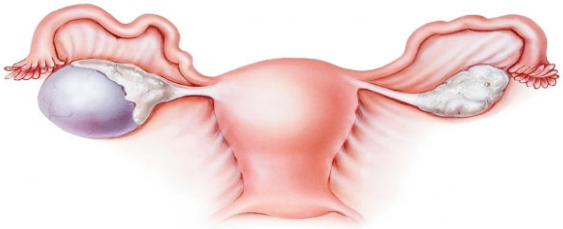
Matthew DeLaney MD


No change in rates of infertility

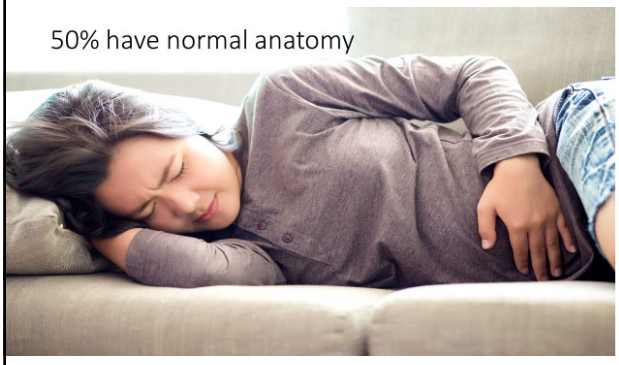
- Abrupt: ~59%
- Sharp: ~70%
- Nausea/Vomiting: ~70%

~30%
No pain

80%

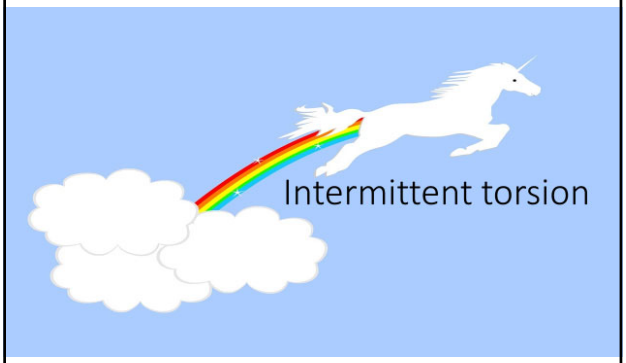


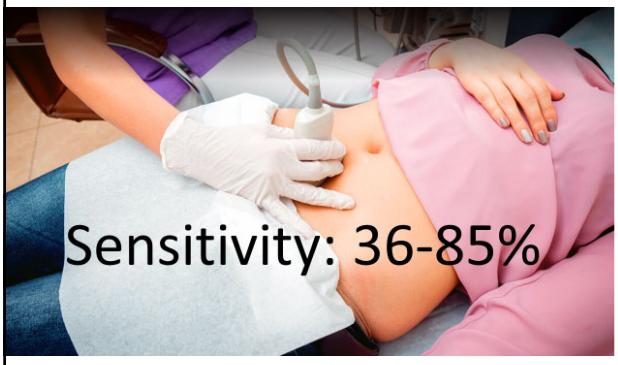
50% have normal anatomy



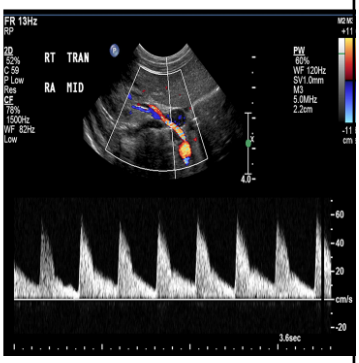
Do you have obvious torsion?

Do you have normal anatomy?

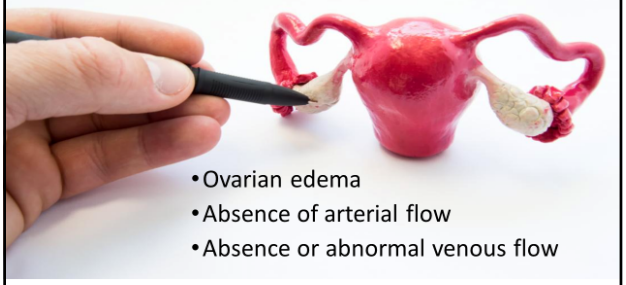




1/3

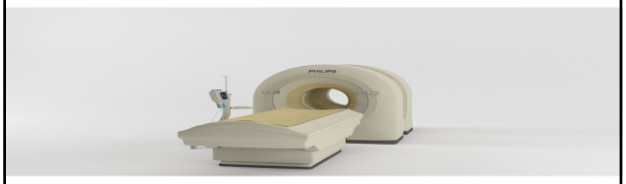


Good specificity: 97-100%



- Ovarian edema
- Absence of arterial flow
- Absence or abnormal venous flow

Very good at identifying abnormal anatomy

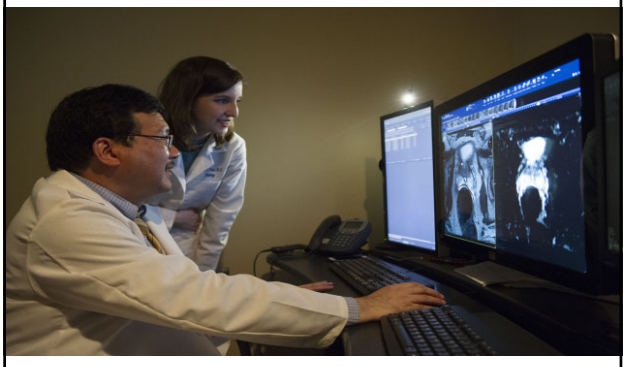


Maybe less pre-operative “accuracy”

CT findings

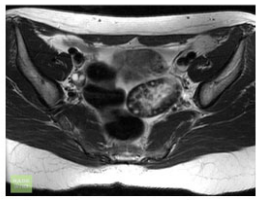
- Cystic/complex adnexal mass (87%)
- Adnexal mass/enlarged ovary (87%)
- Ascites (73%)
- Pelvic fat infiltration (40%)
- Thickened fallopian tubes (40%)

US + CT



Is there torsion?

Sensitivity/Specificity
- US: 80 / 80-85%
- CT: 90-100 / 85-90%



Interobserver agreement was excellent (Kappa=0.85).

Start with a CT:

Do I see obvious torsion? → OB/GYN

↓

Is the anatomy normal → 

↓

Ultrasound

- Torsion may not be obvious clinically
- CT and US are both good
- More is not better

Lit Matters: Does this Patient Need Blood Cultures?

Drew Kalnow, DO FACEP

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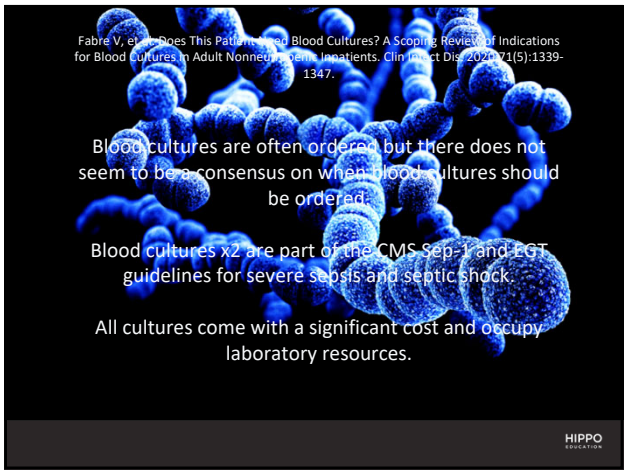

Fabre V, et al. Does This Patient Need Blood Cultures? A Scoping Review of Indications for Blood Cultures in Adult Nonneutropenic Inpatients. Clin Infect Dis. 2020;71(5):1339-1347.

Based off the probability of bacteremia reported, studies were separated based on pretest probability for bacteremia into:

- **Very low (<5%)**: fever w/in 48 hrs of surgery; isolated fever
- **Low (<10%)**: uncomplicated cellulitis; lower UTI; CAP
- **Low to moderate (10-20%):** cellulitis w/severe comorbidities; VAP
- **Moderate (20-50%):** severe sepsis; acute pyelonephritis; cholangitis or pyogenic liver abscess; severe CAP
- **High (>50%):** discitis, vertebral osteomyelitis, or epidural abscess; meningitis; septic shock; septic joints

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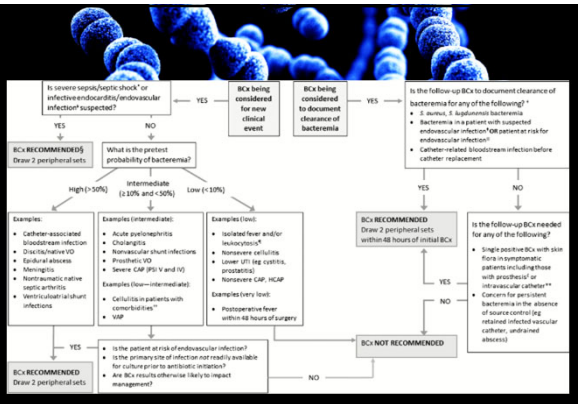

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- Blood cultures were inferior to primary source cultures in cases of cholangitis, pyelonephritis, purulent cellulitis, and severe CAP; though cultures were concordant for urine and blood in terms of pyelonephritis, regardless of complexity.

Bottom Line

Blood cultures for severe sepsis/septic shock remain part of CMS Sep-1 and EGDT. The evidence for blood culture utility increased the sicker the patient was. It is most important to obtain blood cultures on the hard to culture infections.

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Updates in Lower GI Bleeding

Andy Little, DO

Management of Patients With Acute Lower Gastrointestinal Bleeding: An Updated ACG Guideline

February 2023

AJG The American Journal of GASTROENTEROLOGY

Papers from 2015-2021

12 recommendations

A focused history, physical examination, and laboratory evaluation should be obtained at the time of patient presentation to assess the severity of bleeding and its possible location and etiology. Initial patient assessment and hemodynamic resuscitation should be performed simultaneously.

Ask the questions
Do the rectal
Focus on the vital signs
Get the labs

Patients with hemodynamic instability and/or suspected ongoing bleeding should receive intravenous fluid resuscitation with the goal of optimization of blood pressure and heart rate before endoscopic evaluation/intervention.

Give sepsis type fluid boluses
Aggressive Blood transfusion if necessary

Although most patients with LGIB on VKAs are unlikely to require reversal, we suggest reversal of patients who present with a life-threatening LGIB and have an INR substantially exceeding the therapeutic range. For patients on VKAs to prevent stroke in nonvalvular atrial fibrillation who require reversal, 4-factor prothrombin complex concentrate (PCC) is preferred to fresh frozen plasma (FFP) because of the rapidity of INR reduction

If you are going to reverse someone use PCC

For patients on DOACs, we suggest reversal for the small subset of patients who present with a life-threatening LGIB that does not respond to initial resuscitation and cessation of the anticoagulant alone. For patients requiring reversal, targeted reversal agents (idarucizumab for dabigatran and andexanet alfa for apixaban and rivaroxaban) should be used when available if the DOAC has been taken within the past 24 hours

Use the drugs antidote (idarucizumab for dabigatran and andexanet alfa for apixaban and rivaroxaban)

We recommend against the administration of antifibrinolytic agents such as tranexamic acid in LGIB. (Strong recommendation, moderate quality evidence)

No TXA

We recommend the performance of colonoscopy for most patients who are hospitalized with LGIB because of its value in detecting a source of bleeding

However, colonoscopy may not be needed in patients where bleeding has subsided, and the patient has had a high-quality colonoscopy within 12 months with an adequate bowel preparation showing diverticulosis with no colorectal neoplasia.

They don't ALL need a Colonoscopy

We suggest performing a CTA as the initial diagnostic test in patients with ongoing hemodynamically significant hematochezia. However, CTA is of low yield in patients with minor LGIB or those in whom bleeding has clinically subsided.

CTA A/P > CT A/P

We recommend that patients who have a CTA demonstrating extravasation be promptly referred to interventional radiology for transcatheter arteriography and possible embolization. For specialized centers with experience in performing endoscopic hemostasis, a colonoscopy can also be considered after a positive CTA.


If CTA+ then call IR


For patients hospitalized with LGIB requiring a colonoscopy, we recommend performing a nonemergent inpatient colonoscopy because performing an urgent colonoscopy within 24 hours has not been shown to improve clinical outcomes such as rebleeding and mortality.


They don't ALL need a Colonoscopy

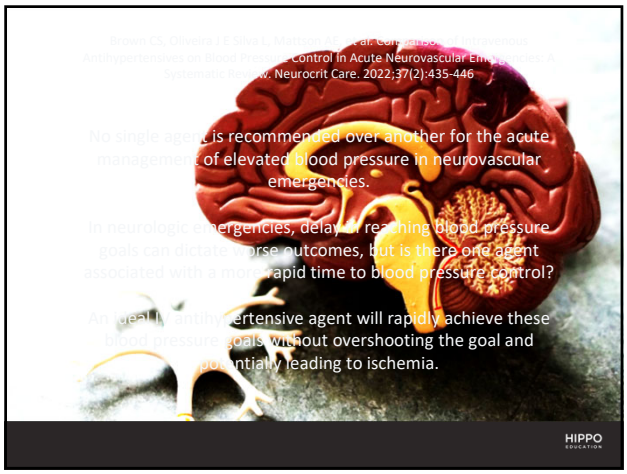
Take Homes

- Little replaces a good history and physical in patients with suspected lower GI Bleeding.
- Obtaining a CTA rather than a CT of the A/P alone will help you manage your patient effectively and aid in choosing the right consultant to reach out to first.
- Rarely do patients need emergent endoscopy for Lower GIB
- Knowing what the ACG asks us to do, can make it easier when we discuss these patients with our local GI docs.

Lit Matters: Unpacking IV Antihypertensives in Neuro Emergencies

Drew Kalnow, DO FACEP

HIPPO EDUCATION


Brown CS, Oliveira J E Silva L, Mattson AE, et al. Comparison of Intravenous Antihypertensives on Blood Pressure Control In Acute Neurovascular Emergencies: A Systematic Review. Neurocrit Care. 2022;37(2):435-446
No single agent is recommended over another for the acute management of elevated blood pressure in neurovascular emergencies.
In neurologic emergencies, delay in reaching blood pressure goals can dictate worse outcomes, but is there one agent associated with a more rapid time to blood pressure control?
An ideal antihypertensive agent will rapidly achieve these blood pressure goals without overshooting the goal and potentially leading to ischemia.
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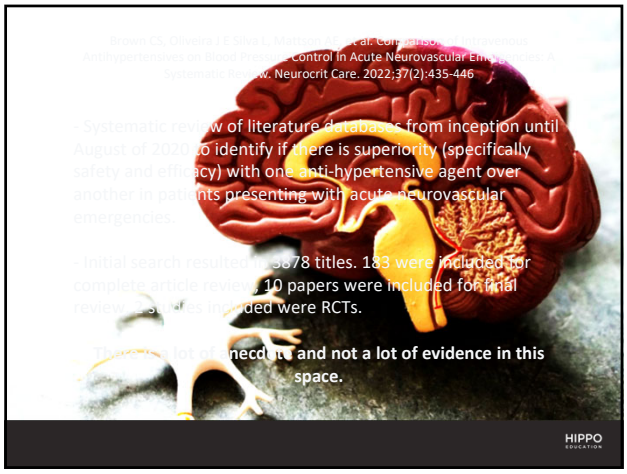
Brown CS, Oliveira J E Silva L, Mattson AE, et al. Comparison of Intravenous Antihypertensives on Blood Pressure Control In Acute Neurovascular Emergencies: A Systematic Review. Neurocrit Care. 2022;37(2):435-446
- Systematic review of literature databases from inception until August of 2020 to identify if there is superiority (specifically safety and efficacy) with one anti-hypertensive agent over another in patients presenting with acute neurovascular emergencies.
- Initial search resulted in 3678 titles. 183 were included for complete article review, 10 papers were included for final review. All studies included were RCTs.
There is a lot of anecdote and not a lot of evidence in this space.
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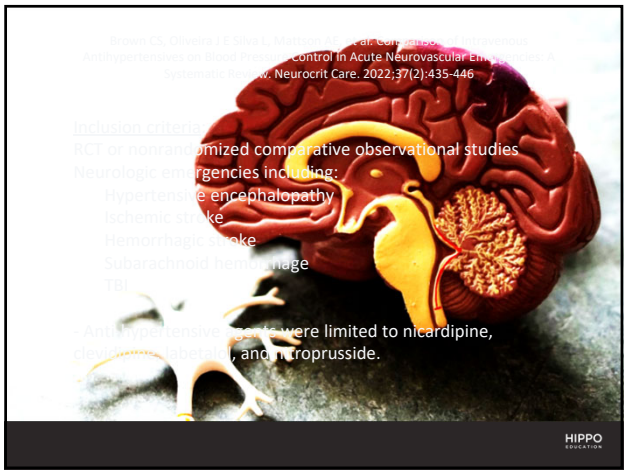
Brown CS, Oliveira J E Silva L, Mattson AE, et al. Comparison of Intravenous Antihypertensives on Blood Pressure Control In Acute Neurovascular Emergencies: A Systematic Review. Neurocrit Care. 2022;37(2):435-446
Inclusion criteria:
RCT or nonrandomized comparative observational studies
Neurologic emergencies including:
Hypertensive encephalopathy
Ischemic stroke
Hemorrhagic stroke
Subarachnoid hemorrhage
TBI
- Anti-hypertensive agents were limited to nicardipine, clevidipine, labetalol, and nitroprusside.
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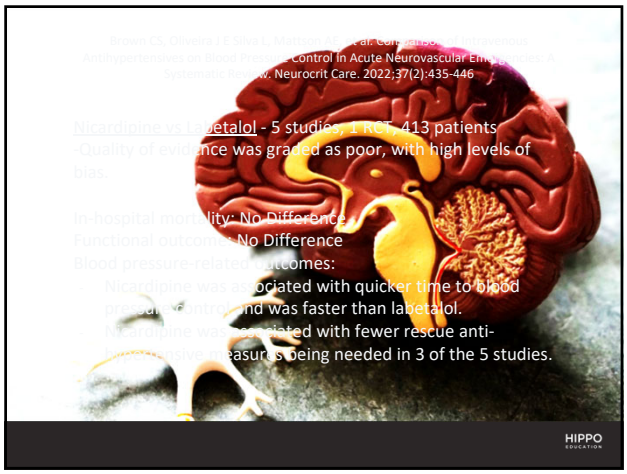
Brown CS, Oliveira J E Silva L, Mattson AE, et al. Comparison of Intravenous Antihypertensives on Blood Pressure Control In Acute Neurovascular Emergencies: A Systematic Review. Neurocrit Care. 2022;37(2):435-446
Nicardipine vs Labetalol - 5 studies, 1 RCT, 413 patients
-Quality of evidence was graded as poor, with high levels of bias.
In-hospital mortality: No Difference
Functional outcome: No Difference
Blood pressure-related outcomes:
- Nicardipine was associated with quicker time to blood pressure control and was faster than labetalol.
- Nicardipine was associated with fewer rescue anti-hypertensive measures being needed in 3 of the 5 studies.
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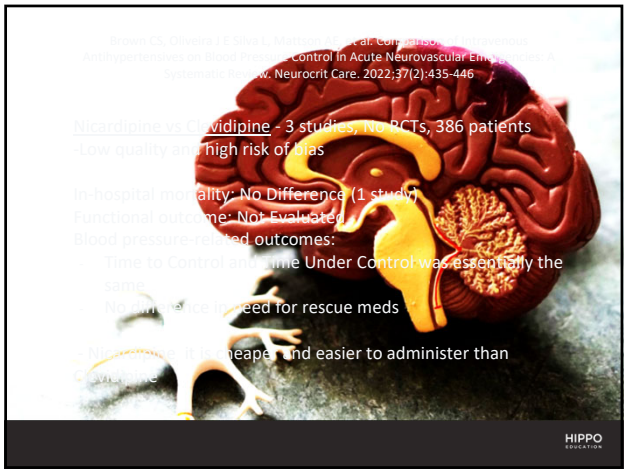
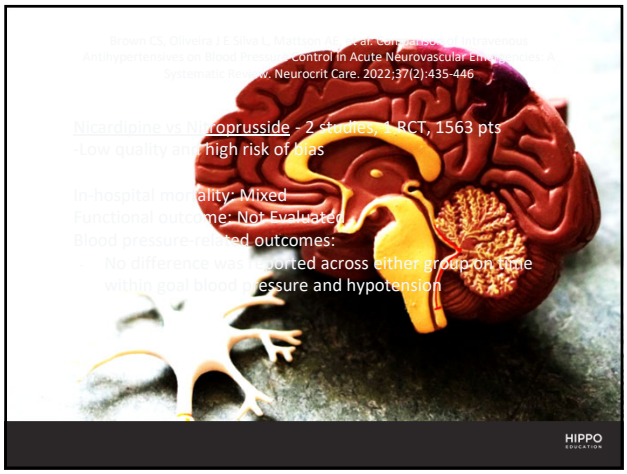
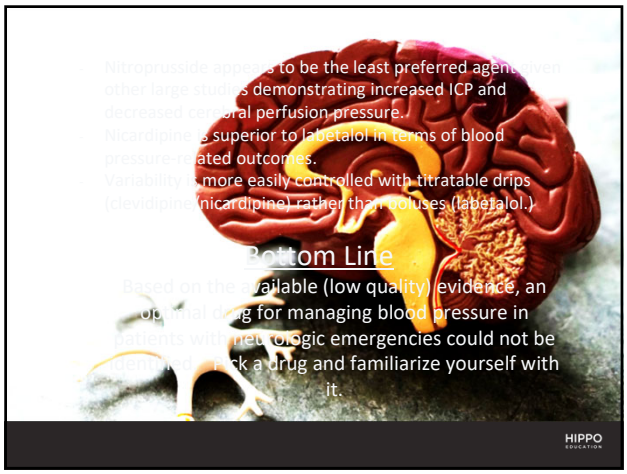
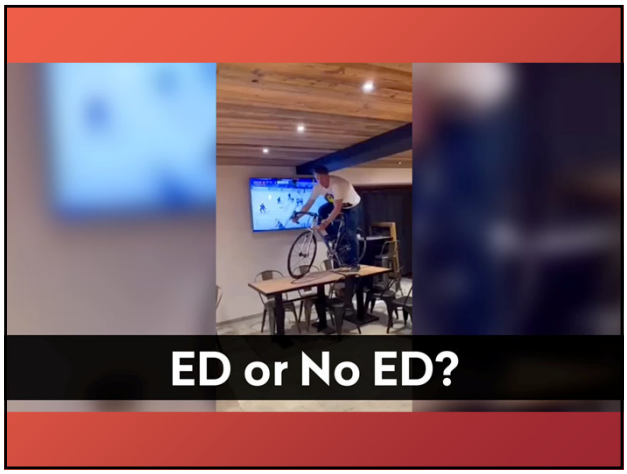
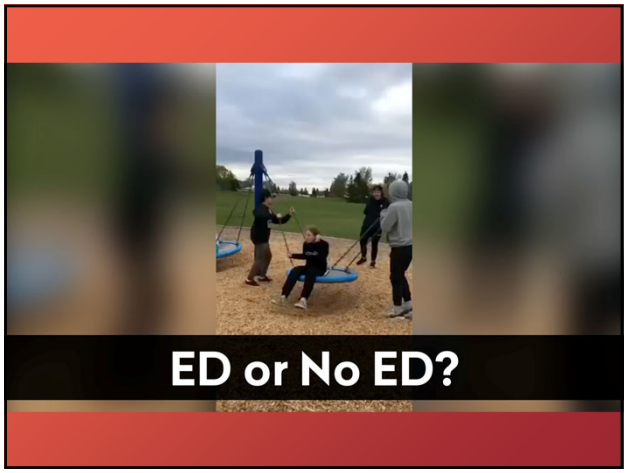

Brown CS, Oliveira J E Silva L, Mattson AE, et al. Comparison of Intravenous Antihypertensives on Blood Pressure Control In Acute Neurovascular Emergencies: A Systematic Review. Neurocrit Care. 2022;37(2):435-446
Nicardipine vs Clevidipine - 3 studies, No RCTs, 386 patients
-Low quality and high risk of bias
In-hospital mortality: No Difference (1 study)
Functional outcome: Not Evaluated
Blood pressure-related outcomes:
- Time to Control and Time Under Control was essentially the same
- No difference in need for rescue meds
- Nicardipine is cheaper and easier to administer than
HIPPO EDUCATION


Brown CS, Oliveira J E Silva L, Mattson AE, et al. Comparison of Intravenous Antihypertensives on Blood Pressure Control In Acute Neurovascular Emergencies: A Systematic Review. Neurocrit Care. 2022;37(2):435-446
Nicardipine vs Nitroprusside - 2 studies, 1 RCT, 1563 pts
-Low quality and high risk of bias
In-hospital mortality: Mixed
Functional outcome: Not Evaluated
Blood pressure-related outcomes:
- No difference was reported across either group on time within goal blood pressure and hypotension
HIPPO EDUCATION

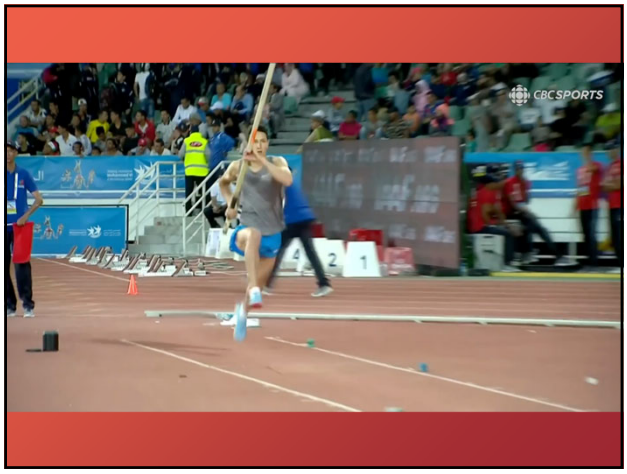

to be the least preferred agent, given
demonstrating increased ICP and
decreased cerebral perfusion pressure.
superior to labetalol in terms of blood
pressure-related outcomes.
more easily controlled with titratable drips
(clevidipine, nicardipine) rather than boluses (labetalol.)
Bottom Line
available (low quality) evidence, an
g for managing blood pressure in
patients with neurologic emergencies could not be
ck a drug and familiarize yourself with
it.
HIPPO


Hippo Education
ERcast
ED or No ED?


ED or No ED?

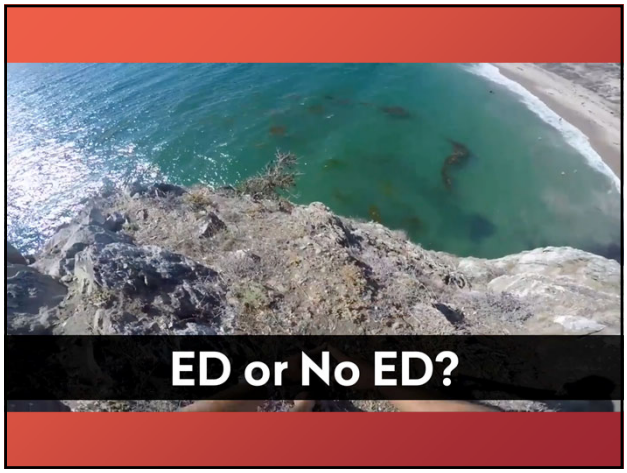

ED or No ED?

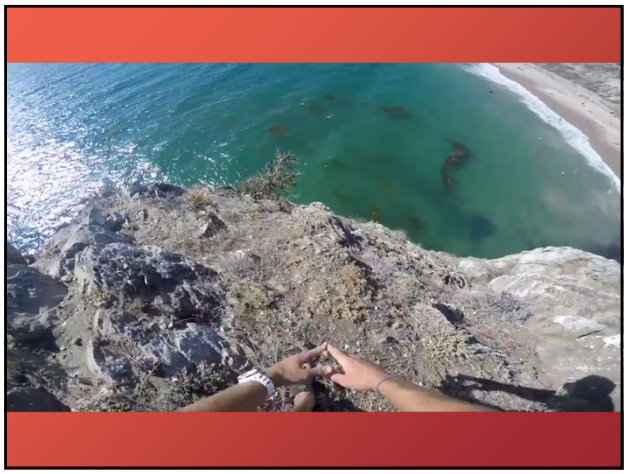

CBC SPORTS
ED or No ED?

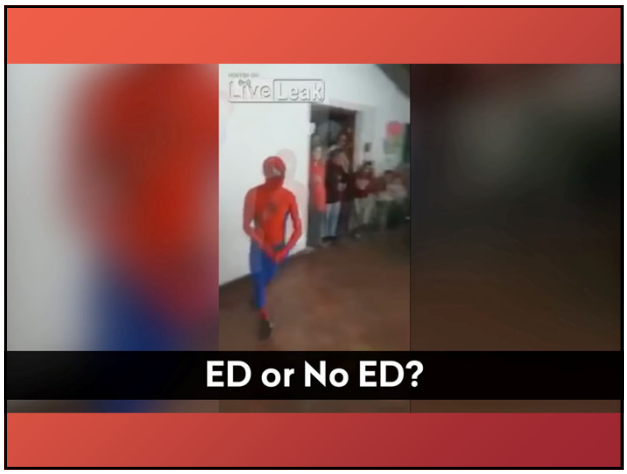

CBC SPORTS

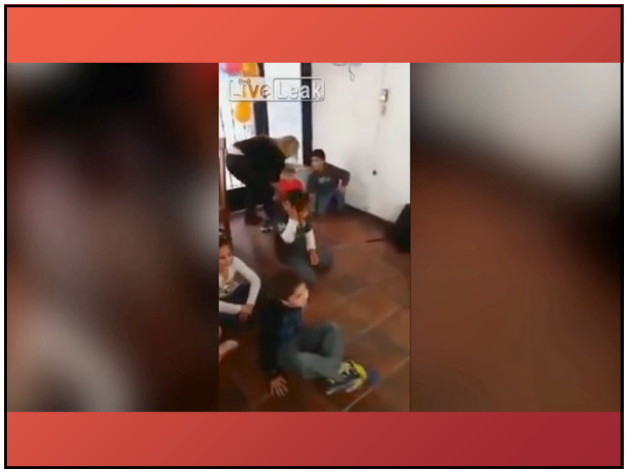

ED or No ED?


JUKIN
VIDEO


ED or No ED?




LiveLeak
ED or No ED?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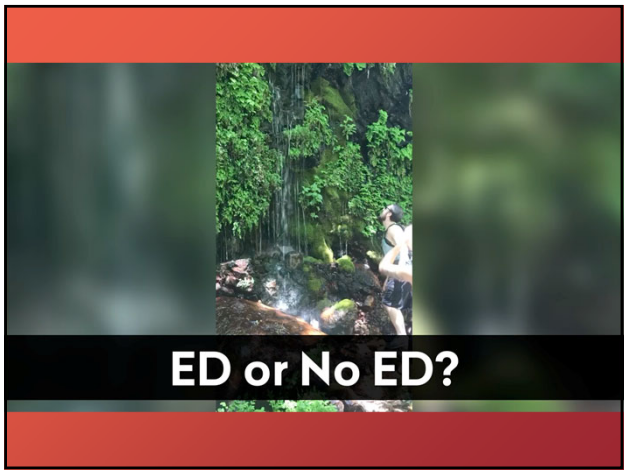
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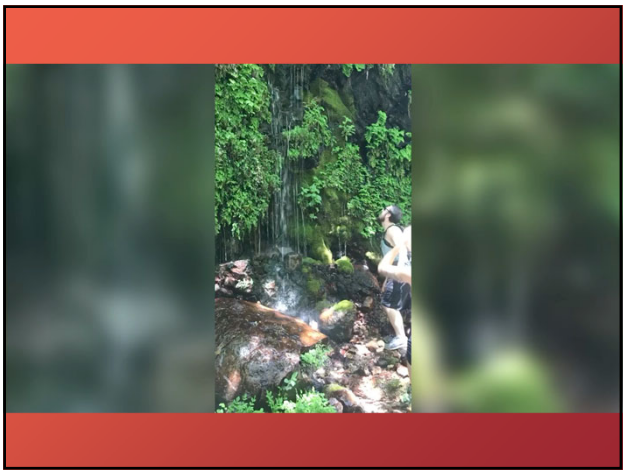

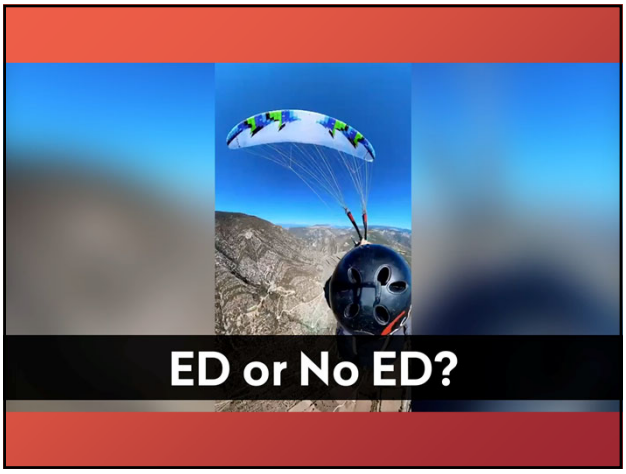
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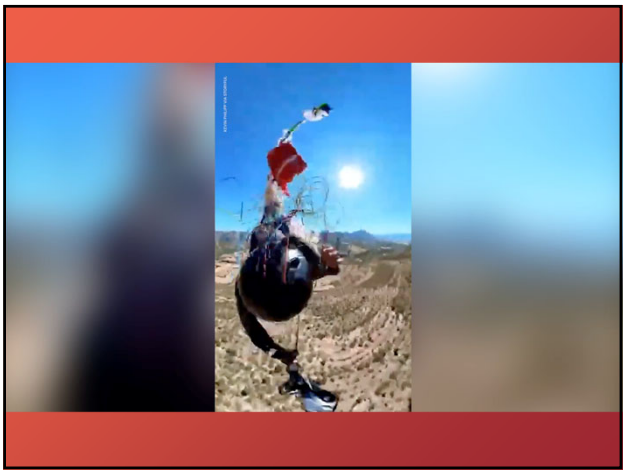

Lit Matters: Can we Sub hsTn for cTn in the HEART Pathway?

Drew Kalnow, DO FACEP

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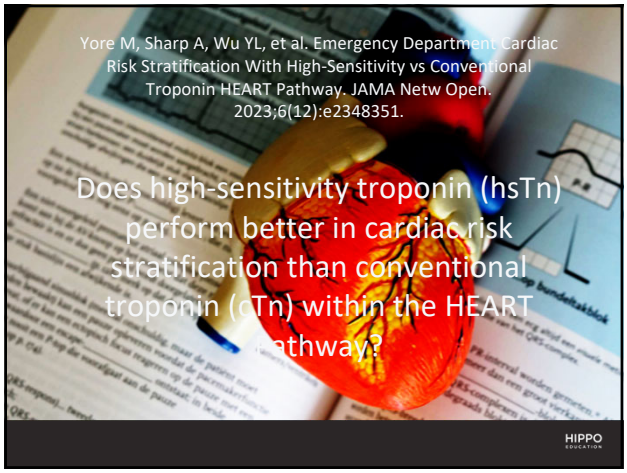

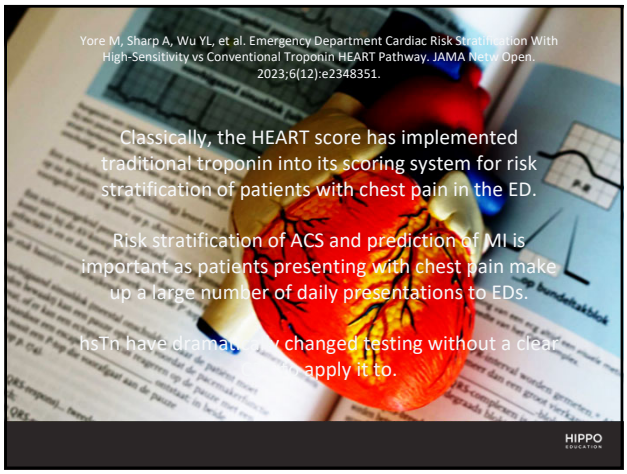

Yore M, Sharp A, Wu YL, et al. Emergency Department Cardiac Risk Stratification With High-Sensitivity vs Conventional Troponin HEART Pathway. JAMA Netw Open. 2023;6(12):e2348351.

- Multicenter, pre-post cohort study
- Implemented hsTn within the centers and compared it to traditional troponin within the HEART pathway @ Kaiser Southern California

- Primary outcome: all-cause mortality and detection of AMI in the ED AND within 30 days
- Secondary outcomes: hospital admission, stress testing within 72 hrs, and coronary revascularization within 30 days

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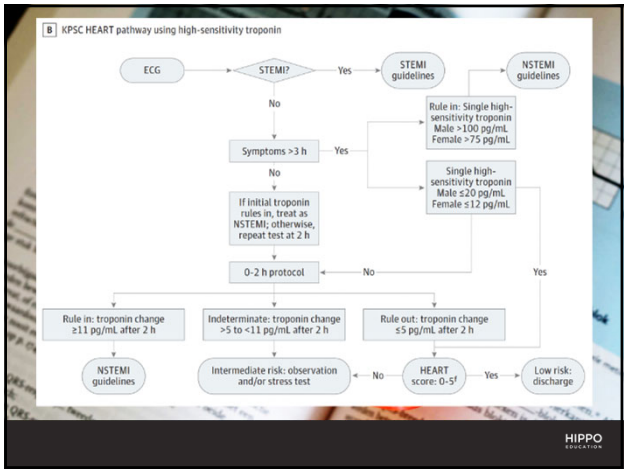

HIPPO EDUCATION

Yore M, Sharp A, Wu YL, et al. Emergency Department Cardiac Risk Stratification With High-Sensitivity vs Conventional Troponin HEART Pathway. JAMA Netw Open. 2023;6(12):e2348351.

- Primary outcomes:
  - 5.8% for hsTn vs. 4.4% for cTn (P<.001)
  - 79.1% of patients in the hsTn group received a diagnosis during their initial ED visit compared to 46.1% in the cTn group (P<.001)
  - All-cause mortality within 30 days was unchanged between the two groups.
- Secondary outcomes:
  - Decreased rate of admission and testing with hsTn group

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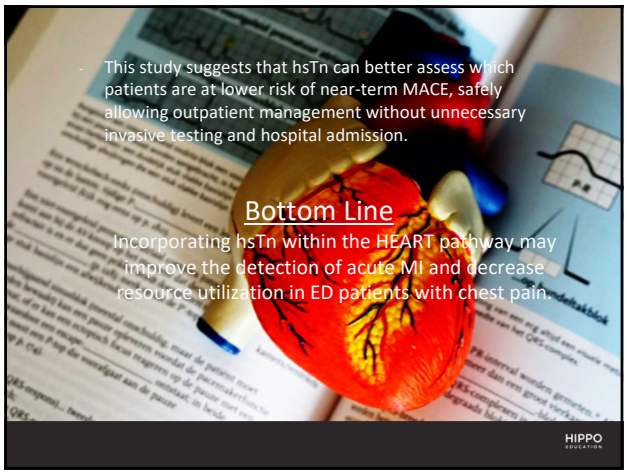
This study suggests that hsTn can better assess which patients are at lower risk of near-term MACE, safely allowing outpatient management without unnecessary invasive testing and hospital admission.
Bottom Line
Incorporating hsTn within the HEART pathway may improve the detection of acute MI and decrease resource utilization in ED patients with chest pain.
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ZYN
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