MYEMCERT: THORACORESPIRATORY

Kevin Hanley, MD

SESSION OBJECTIVES

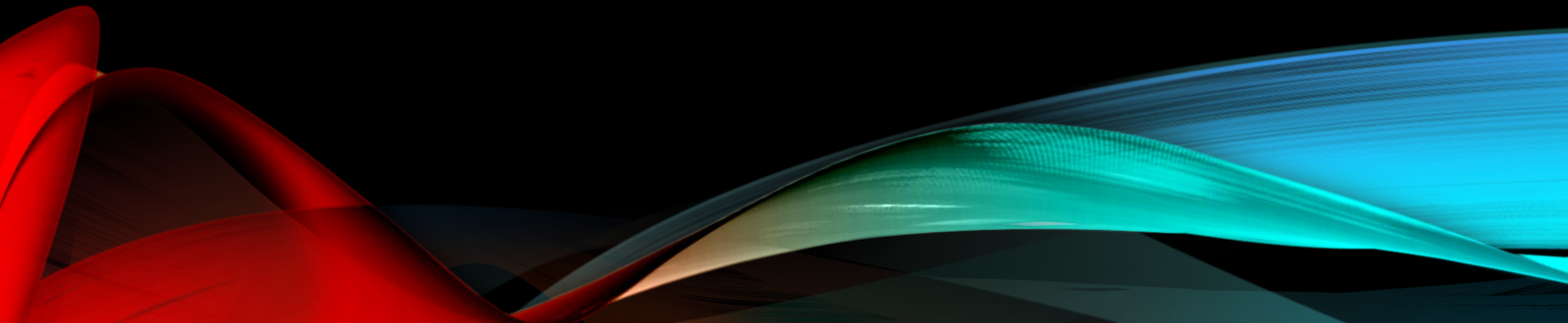
- Simplify the required steps to maintain ABEM Certification
- Review key test-taking strategies for the MyEMCert modules
- Discuss high-yield Thoracorespiratory topics

STAY CALM!

IMPROVEMENT IN MEDICAL PRACTICE

- One project per 5 year cycle (two for EMS and Tox)
- Long list of approved activities
- Approved by department chair, medical director, or QI director
- Group Projects Encouraged!
- Follows these four steps:

MYEMCERT MODULES



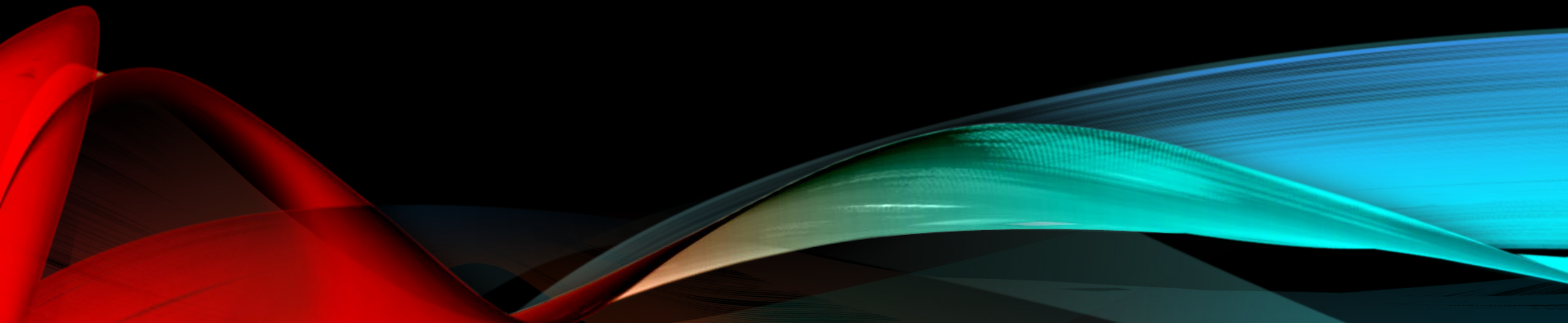
MYEMCERT MODULES

- 5 year certification cycle
- Payment is $320/year or $1500 all at once
- Do not need to pay the $30 for the CME option → Because you're here!
- Complete 4 modules in each 5 year period
- All open book/internet, but cannot use AI and must work alone

MYEMCERT MODULES

- 50 questions each, 4 hours total
- 80% of questions are related to that specific topic
- 20% of questions are related to “Key Advances”
- 3 attempts per test per year
- 84% is passing (42/50)
- Immediately get correct answer and rationale after each question

KEY ADVANCES



KEY ADVANCES

For what age group is intact cord milking not recommended?

See Key Advance Article: https://www.abem.org/wp-content/uploads/2024/07/key-advances_-nrp_clinical-policy-alert.pdf

a) Well-appearing term and late preterm infants
b) Nonvigorous term and late preterm infants
c) Preterm newborn infants >28 weeks and <34 weeks gestation
d) Preterm newborn infants < 28 weeks gestation

completed to identify potential interventions and assign roles and responsibilities.
Class of Recommendation 1, Strong

Most newly born infants do not require immediate cord clamping or resuscitation and can be evaluated and monitored during skin-to-skin contact with their mothers after birth.

- **For term and late preterm** newborn infants ≥34 weeks' gestation who do not require resuscitation, delayed cord clamping (DCC) (≥30 seconds) can be beneficial when compared to early cord clamping (<30 seconds). *Class of (Recommendation 2a, LOE B-R)*
- **For nonvigorous term and late preterm** infants (35–42 weeks' gestation), intact cord milking may be reasonable when compared to early cord clamping (<30 seconds). (Recommendation 2b, LOE B-R)
- **For term and late preterm** newborn infants ≥34 weeks' gestation who do not require resuscitation, intact cord milking is not known to be beneficial when compared to DCC (≥30 seconds). (Recommendation 3: No benefit, LOE C-LD)
- **For preterm newborn infants <34 weeks'** gestation who do not require resuscitation, DCC (≥30 seconds) can be beneficial when compared to early cord clamping (<30 seconds). (Recommendation 2a, LOE B-R)
- For preterm newborn infants <28 weeks' gestation, intact cord milking is not recommended. (Recommendation 3: No benefit, LOE B-R)

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For what age group is intact cord milking not recommended?

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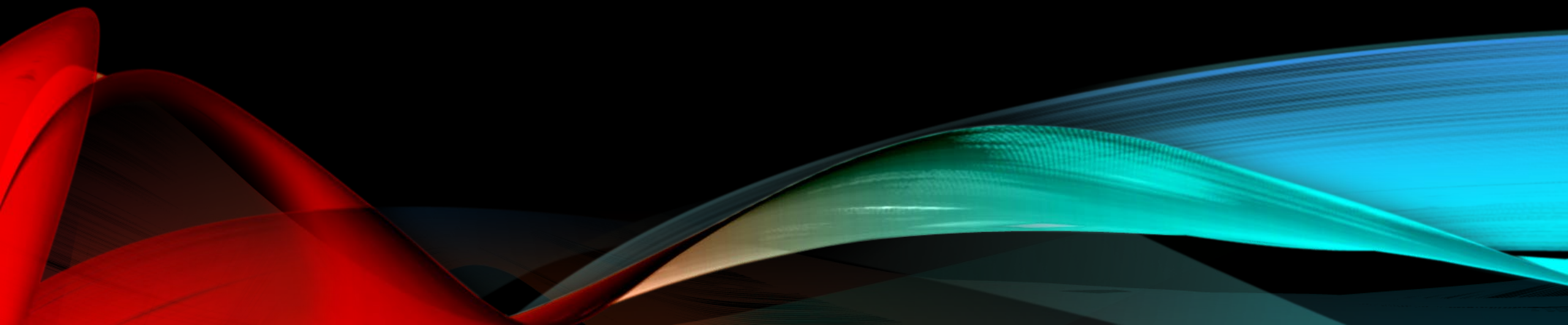
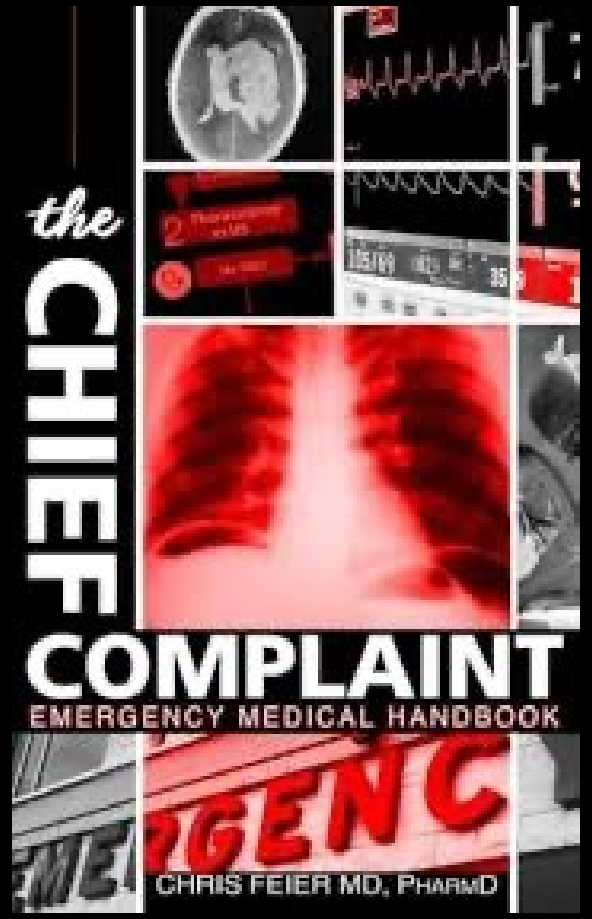
THORACORESPIRATORY CONTENT REVIEW



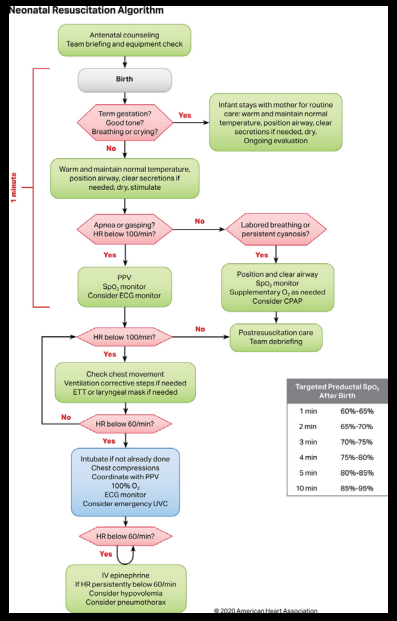
TEST-TAKING STRATEGY

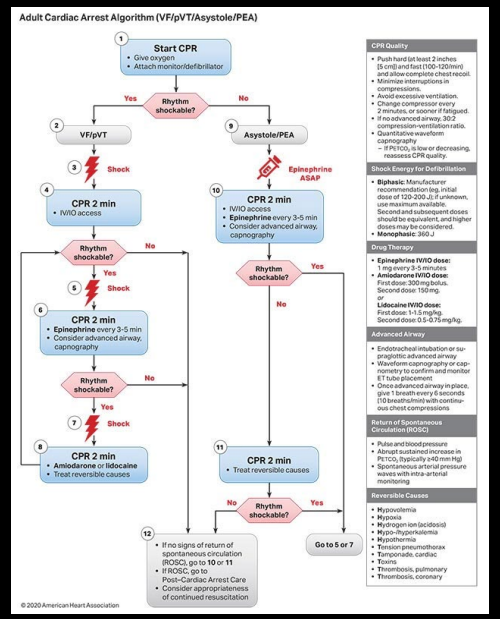
- Take your time
- Test early and often
- Before you think zebra, feed the horse!
- Follow your ABC's

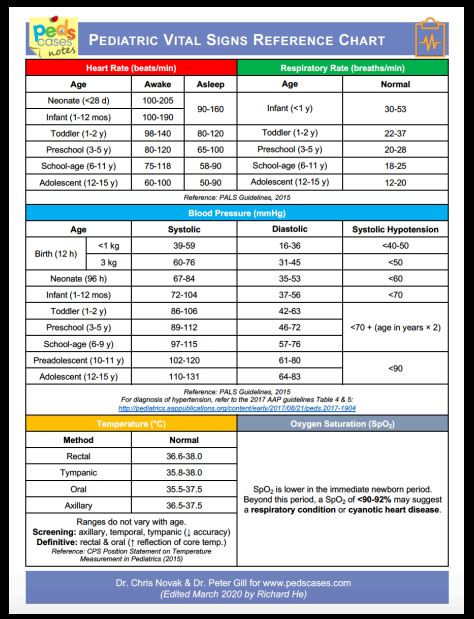


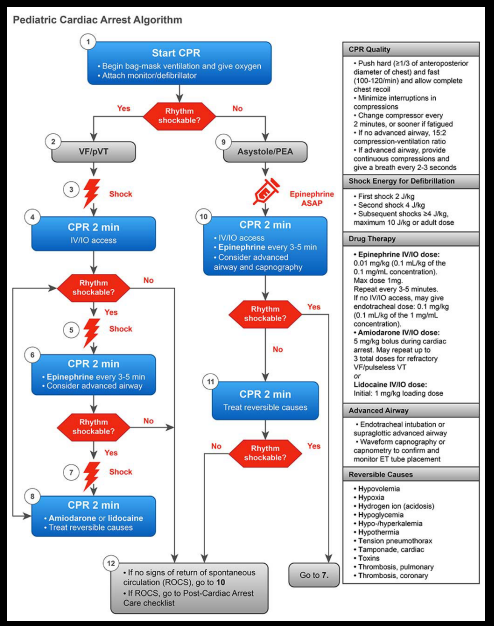
RESOURCES

- MDCalc
- https://www.acep.org/toxicology/cases/simulation-cases OR search Ohio ACEP toxicology Cases
- https://www.abem.org/stay-certified/modules/key-advances/



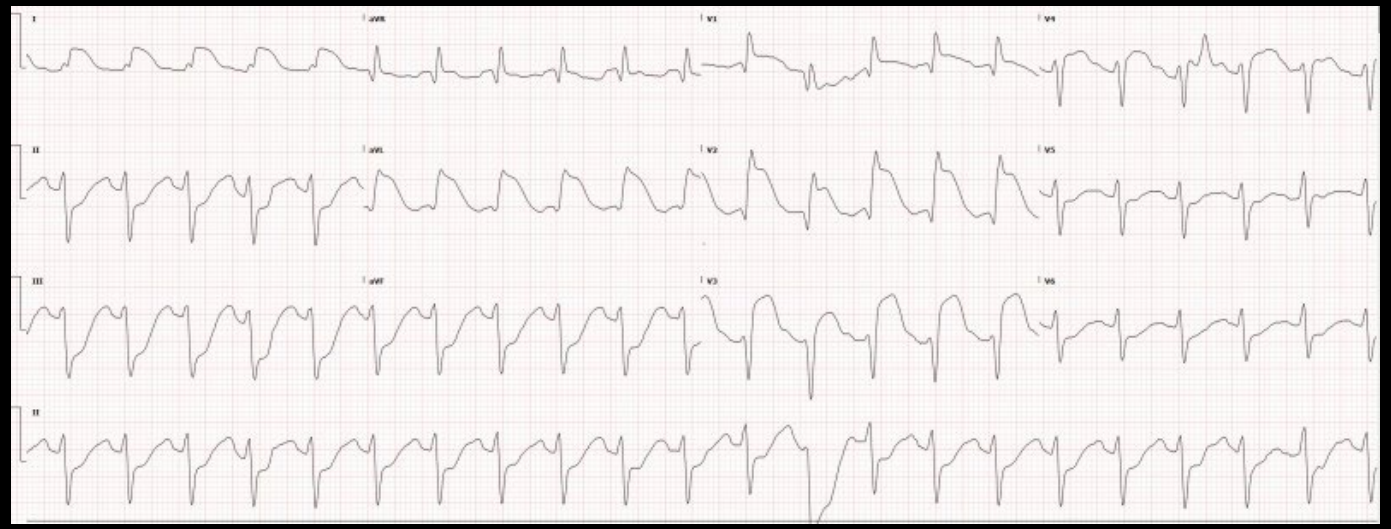






STEMI

- Presentation
  - Think CLASSIC (male) presentations
  - Crushing, substernal pain radiating to the shoulder/jaw
- Findings
  - EKGs will not be subtle
  - Repeat q15minutes
- Treatment
  - ASA, nitro right away
  - Activate Cath Lab
  - No MONA



DISSECTION

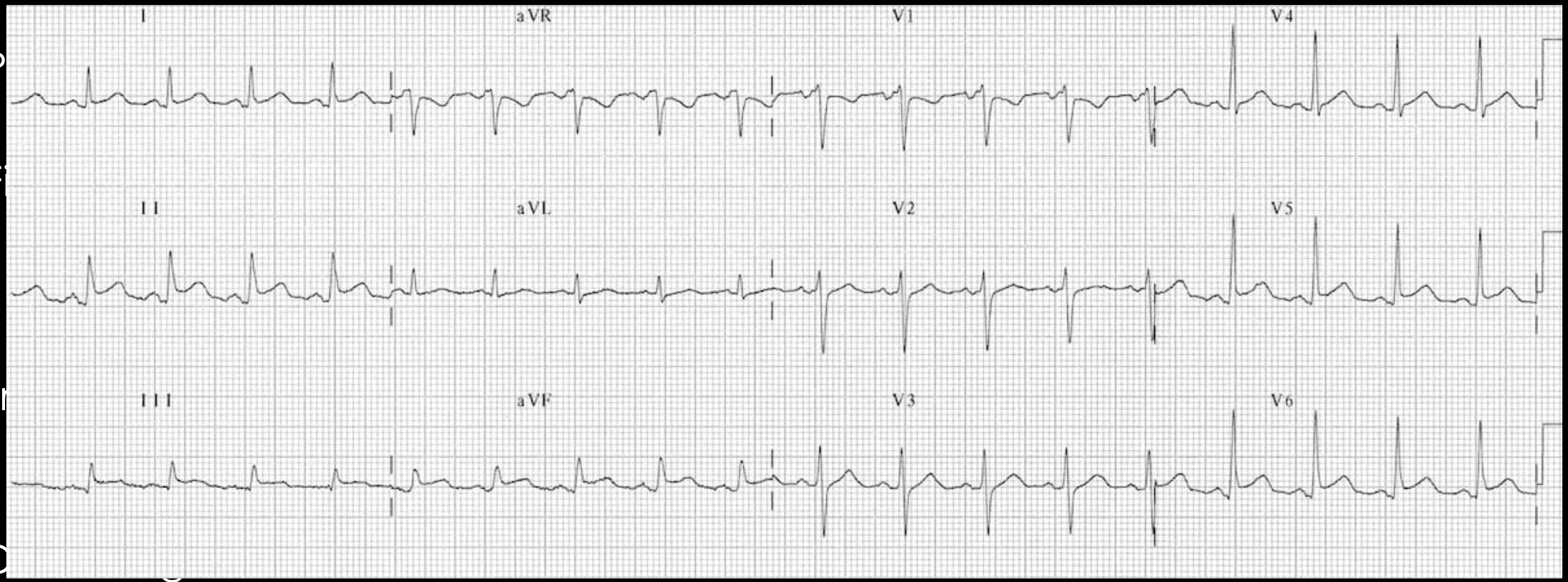
- Presentation
  - Sudden, tearing chest pain radiating to the back
- Findings
  - Pulse deficit, new murmur, neuro deficit
  - Widened mediastinum on CXR
- Treatment
  - Beta blocker FIRST (i.e. esmolol)
  - Then vasodilators (nicardipine, clevidipine, classically nitroprusside)
  - Goal: HR<60, BP< 120/80
  - Pain control

PULMONARY EMBOLISM

- Presentation
  - Pleuritic chest pain, unilateral leg swelling, dyspnea
  - With a risk factor: OCPs, cancer, family history
- Findings
  - Sinus tachycardia
  - EKG with S1Q3T3, +/- TWI V1-V3
  - Echo with RV strain, increased RV size, ‘D’ sign
- Treatment
  - DOAC if stable
  - Thrombolytics for massive PE

PERICARDITIS

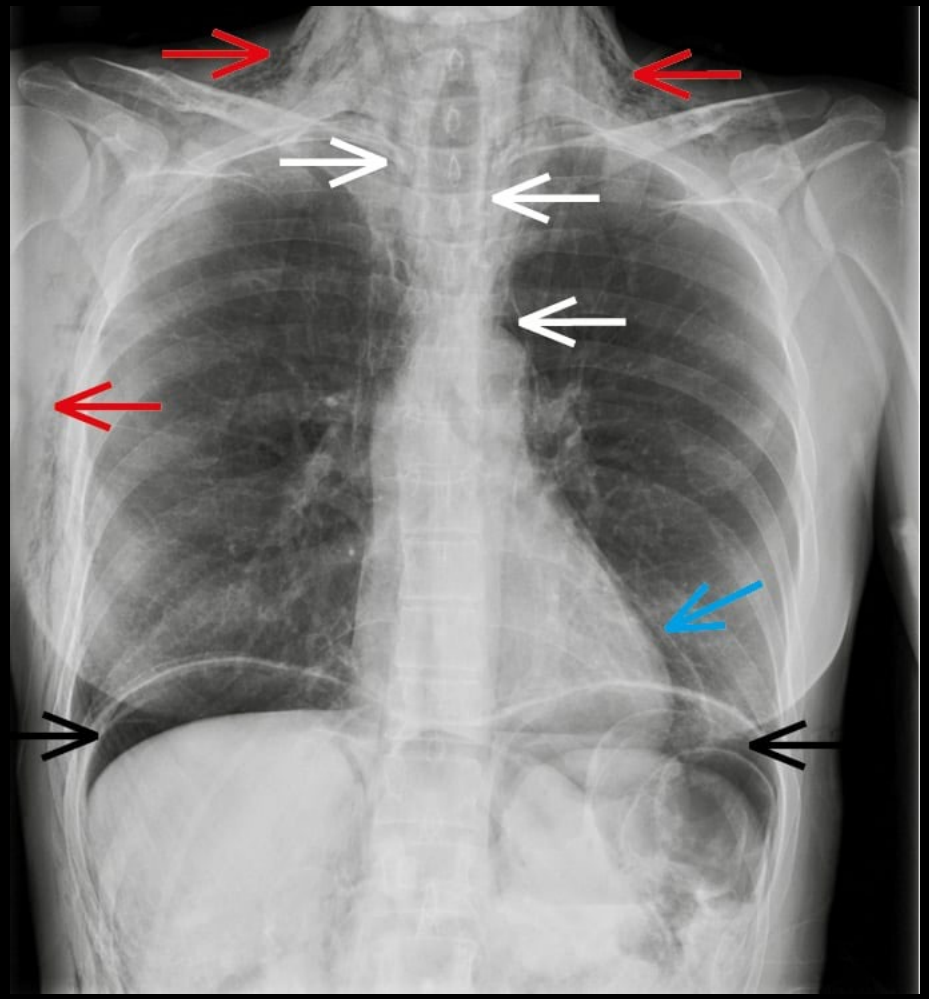
- P
- F
- Tr
- D
  - Evaluate for tamponade: electrical alternans, low voltage QRS, distant heart sounds



PNEUMOTHORAX

- Presentation
  - Young, tall male, acute onset chest pain and dyspnea
- Findings
  - May have CXR
  - Absent lung sliding on US
- Treatment
  - Oxygen vs pigtail
  - Needle decompression for tension PTX
  - Pigtail/CT if giving positive pressure

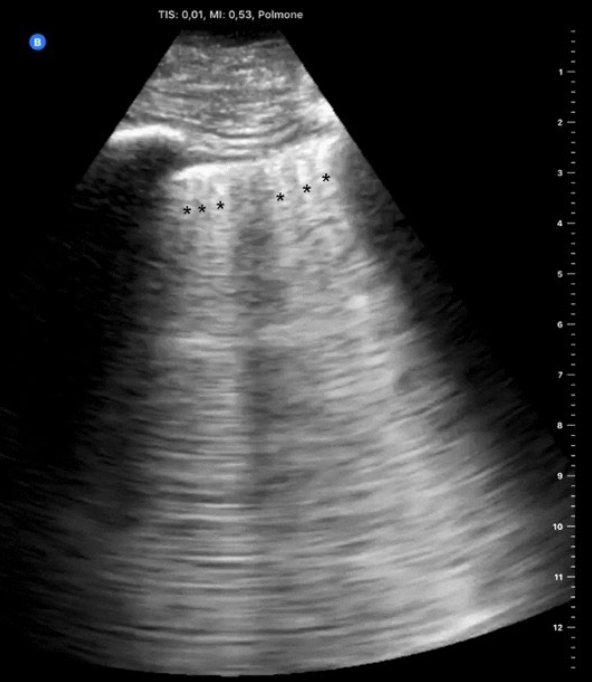
BOERHAAVE'S



- Presentation
  - severe vomiting, maybe hematemesis
  - Retrosternal chest pain, upper abdominal pain
  - Can lead to tachypnea, dyspnea, fever, shock
- Findings
  - CXR may have mediastinal/peritoneal air, PTX, pleural effusion
- Treatment
  - NPO, IV antibiotics, surgical consult

“FLASH” PULMONARY EDEMA

- Presentation
  - Obviously fluid-overloaded patient gasping for breath
- Findings
  - Chest Xray with obvious pulmonary edema
  - Ultrasound with diffuse, confluent B-lines
- Treatment
  - High-dose nitro (100-200mcg/min) initial dose
  - NIPPV



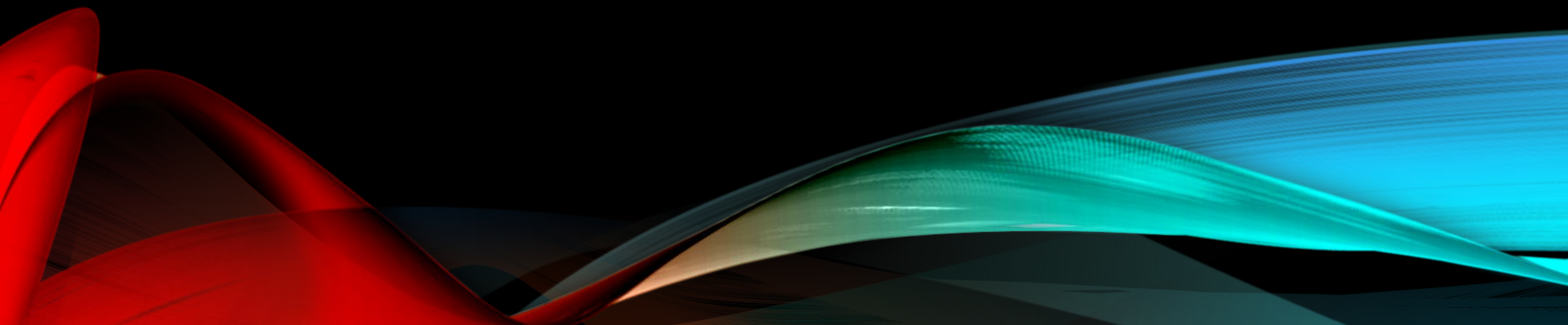
SYNCOPE

- Presentation
  - …syncope
  - Evaluate for seizure: post-ictal? Oral trauma? b/b incontinence?
- Findings
  - Eval for hypoglycemia, hyponatremia, anemia, pregnancy
  - EKG: Brugada, Long QTc, tachyarrhythmia, STE, HCM, WPW
  - PE findings
- Treatment
  - Dependent on findings above

ARRHYTHMIA

- ABCs first
- Unstable VT/VF: defibrillation
- Torsades de Pointes: Mg, overdrive pacing
- Unstable anything else: synchronized cardioversion
- Specific treatments
  - SVT: Vagal maneuvers, adenosine, CCBs or BBs
  - A-fib, a-flutter, MAT: CCBs, BBs
  - Wide, regular, stable: anti-arrhythmics, Mg

PEDIATRICS



PERTINENT PALS POINTS

- Most arrests are respiratory or shock-related
- Compression depth: 1/3rd AP diameter
- Rate is 30:2 for 1 rescuer and 15:2 for 2 rescuer
- Initial shock if indicated: 4 J/kg, up to 10 J/kg
- Peds pads preferred, adults acceptable
- Assume bradycardia is from hypoxia: give oxygen first
- If it persists: epi 0.01 mg/kg and can consider atropine 0.02 mg/kg

NRP NB

- Initial steps: warm, dry, stimulate and effectively ventilate
- HR>100: usual care
- HR 60-100: PPV
- HR<60: PPV for 30 seconds and if persisting: chest compressions
- HR<60 after 60 seconds of PPV and compressions: epinephrine
- CPR: 3:1 compressions: ventilations, aim for 90 compressions and 30 breaths per minute
- CPR is done with two thumb encircling hands technique

EPIGLOTTITIS

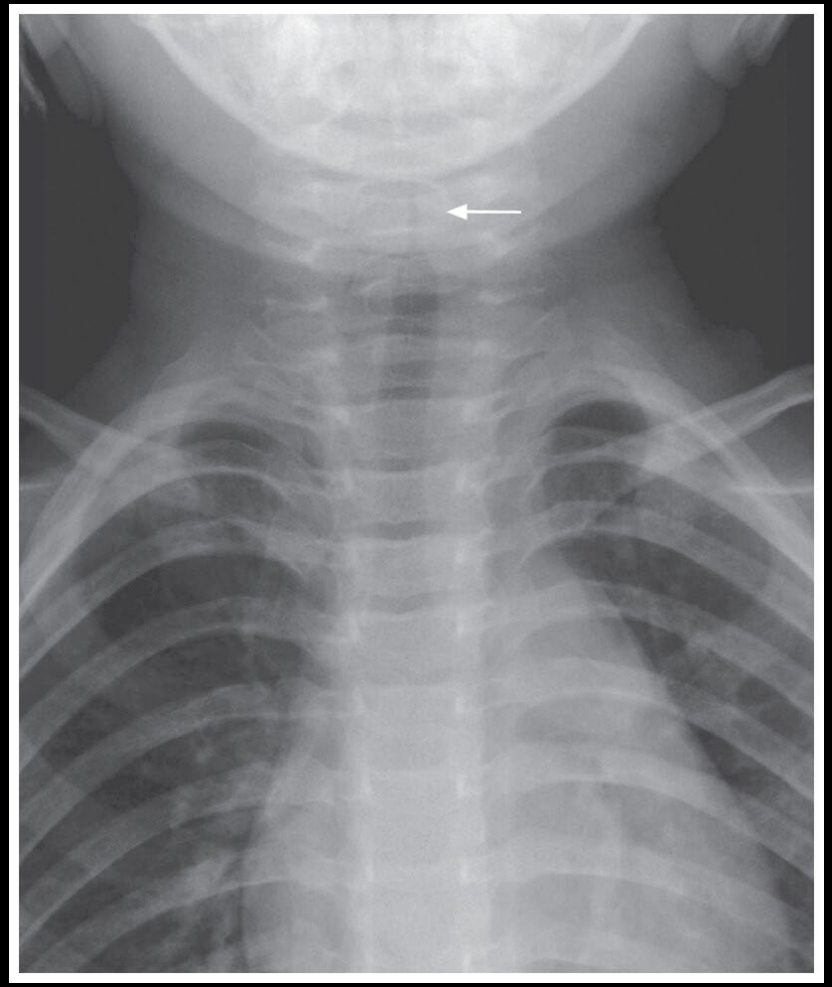
- Presentation
  - Toxic, irritable 2-8 year old with a viral prodrome
  - Tripoding, neck hyperextension
  - The D's: drooling, dyspnea, dysphonia, dysphagia
- Findings
  - Lateral neck Xray shows thumbprint sign
- Treatment
  - Avoid agitating the child
  - Antibiotics (unasyn)
  - If intubation needed: downsize ETT 0.5-1
  - ETT size normally (age/4)+3.5 for a cuffed tube

RETROPHARYNGEAL ABSCESS

- Presentation
  - Torticollis, decreased neck extension, flexion
  - Dysphagia, trismus, toxic-appearance, febrile
  - Can be confused with meningitis, less AMS in RPA
- Findings
  - XR unlikely useful, CT will diagnose
- Treatment
  - ENT consult, antibiotics
- Complications
  - Airway compromise
  - Descending necrotizing mediastinitis
  - IJ Thrombus, mycotic aneurysms

BACTERIAL TRACHEITIS

- Presentation
  - Cough, high fever, toxic-appearing, respiratory distress
  - Present similarly to croup but do not respond to treatment
- Findings
  - Steeple Sign
- Treatment
  - Emergent airway
  - Ideally with consultants or in the OR
  - Broad spectrum abx



CROUP

- Presentation
  - Viral prodrome, barky cough
  - Fever is common, typically not toxic appearing
  - May have stridor
- Findings
  - Typically no imaging or work-up done
- Treatment
  - Steroids (typically decadron 0.6mg/kg)
  - Racemic epinephrine for moderate to severe croup (stridor at rest)
  - Need obs period after rac epi (~3 hours)

FOREIGN BODY ASPIRATION

- Presentation
  - Classic triad (1/3rd of cases): wheezing, cough, decreased breath sounds
  - Usually asymptomatic in the ED
  - Violent cough → asymptomatic interval → complications
- Findings
  - Xrays normal in 2/3rd patients
  - Can get insp/exp films
- Treatment
  - Position of comfort
  - ENT consult/bronchoscopy

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THANK YOU!