

Rap #14, 12/16 Regions Rap Overview (HEENT & Heme)

Updated May 30th, 2017

Rap #14, 12/16 Regions Rap Overview (HEENT & Heme)

[TTJV/ Needle Cric \(EMCrit 10/16/16, hosted by Scott Weingart\) – Reviewed by Steve Palm](#)

- Podcast covering a paper looking at complications of front-of-neck access (FONA) with transtracheal jet ventilation (TTJV) for can't intubate, can't oxygenate (CICO) scenarios in commercially available products.
 - Current recommendations.
 - UK recommends scalpel for CICO.
 - Australia recommends individual preference for CICO.
 - Over half (46/90) had complications in CICO situations.
 - Barotrauma (32%)
 - Equipment failure (42%)
 - Even if you are comfortable with TTJV the hosts would not recommend it for CICO.
 - If you are using the commercially available device, they recommend vent train device
 - Can temporarily ventilate (exhalation) with less risk of breath stacking and barotraumas.
 - Likely worse data for jury rigged techniques.
 - Here's an example
- Also made a plug for the Airway App from SMACC.
 - App where you can upload difficult airway information for crich/ awake intubation where data can be shared.
- **Evaluation**
 - AIR Grade:

Tier 1: BEEM Rater Scale	Score-choose only 1	Tier 2: Content accuracy	Score-choose only 1	Tier 3: Educational Utility	Score-choose only 1	Tier 4: EBM	Score-choose only 1	Tier 5: Referenced	Score-choose only 1
Assuming that the results of this article are valid, how much does this article impact on EM clinical practice?		Do you have any concerns about the accuracy of the data presented or conclusions of this article?		Are there useful educational pearls in this article for residents?		Is this article reflect evidence based medicine (EBM) and thus lack bias?		Are the authors and literature clearly cited?	

Useless information	<input type="radio"/>	Yes, many concerns from many inaccuracies	<input type="radio"/>	Low value: No valuable pearls	<input type="radio"/>	Not EBM based, only expert opinion (and thus more biased)	<input type="radio"/>	No	<input type="radio"/>
Not really interesting, not really new, changes nothing	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>
Interesting and new, but doesn't change practice	<input type="radio"/>	Yes, a major concern about few inaccuracies	<input type="radio"/>	Yes, but there are only a few (1-2) valuable or multiple ($>=3$) less-valuable educational pearls	<input checked="" type="radio"/>	Minimally EBM based	<input type="radio"/>		<input type="radio"/>
Interesting and new, has the potential to change practice	<input checked="" type="radio"/>		<input type="radio"/>		<input type="radio"/>	Mostly EBM based	<input type="radio"/>		<input type="radio"/>
New and important: this would probably change practice for some EPs	<input type="radio"/>	Minimal concerns over minor inaccuracies	<input type="radio"/>	Yes, there are several ($>=3$) valuable educational pearls, or a few (1-2) KEY educational pearls that every resident should know before graduating	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>
New and Important: this would change practice for most EPs	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>	Yes exclusively EBM based (unbiased)	<input checked="" type="radio"/>	Yes	<input type="radio"/>
This is a "must know" for EPs	<input type="radio"/>	No concerns over inaccuracies	<input checked="" type="radio"/>	Yes, there are multiple KEY educational pearls that residents should know before graduating	<input type="radio"/>				<input checked="" type="radio"/>
Your Score	4		7		3		7		7

Nasopharyngoscopy (SMACC, created by Glenn Paetow, Rob Reardon, Andie

Rowland-Fisher) – Reviewed by Hilary Simon

- Nasopharyngoscopy offers better view of hypopharynx than oropharyngoscopy and less gagging.
- Prep:

1) ANESTHESIA:

- Oral:
 - nebulized lidocaine, cetocaine (only relieve some of gag reflex)
 - Smear LMX on back of throat like buttering toast
- Nasal:
 - Oxymetazoline
 - Urojet
 - Have the patient slowly sniff while administering the urojet.

2) POSITIONING:

- HOB up to 90 degrees.
- back of patient's head should be resting on stretcher so they cannot move head backwards.
- Once scope is in nasopharynx, have patient move head into exaggerated sniffing position.

3) SCOPE:

- Hold scope handle in dominant hand and **keep it straight** with non-dominant hand.
 - Pushing the lever up, moves the camera down.
 - Pushing the lever down, moves camera up.
- PROCEDURE:
 1. Advance scope through nare.

2. Have patient swallow to remove saliva/ secretions once scope is in nasopharynx.
3. Have patient move head into exaggerated sniffing position.
4. Advance camera slowly, move camera up/down, rotate scope as needed.

• Evaluation

○ AIR Grade:

Tier 1: BEEM Rater Scale	Score-choose only 1	Tier 2: Content accuracy	Score-choose only 1	Tier 3: Educational Utility	Score-choose only 1	Tier 4: EBM	Score-choose only 1	Tier 5: Referenced	Score-choose only 1
Assuming that the results of this article are valid, how much does this article impact on EM clinical practice?		Do you have any concerns about the accuracy of the data presented or conclusions of this article?		Are there useful educational pearls in this article for residents?		Is this article reflect evidence based medicine (EBM) and thus lack bias?		Are the authors and literature clearly cited?	
Useless information	<input type="radio"/>	Yes, many concerns from many inaccuracies	<input type="radio"/>	Low value: No valuable pearls	<input type="radio"/>	Not EBM based, only expert opinion (and thus more biased)	<input checked="" type="radio"/>	No	<input checked="" type="radio"/>
Not really interesting, not really new, changes nothing	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>
Interesting and new, but doesn't change practice	<input type="radio"/>	Yes, a major concern about few inaccuracies	<input type="radio"/>	Yes, but there are only a few (1-2) valuable or multiple (≥ 3) less-valuable educational pearls	<input type="radio"/>	Minimally EBM based	<input type="radio"/>		<input type="radio"/>
Interesting and new, has the potential to change practice New and important: this would probably change practice for some EPs	<input type="radio"/>	Minimal concerns over minor inaccuracies	<input type="radio"/>	Yes, there are several (≥ 3) valuable educational pearls, or a few (1-2) KEY educational pearls that every resident should know before graduating	<input type="radio"/>	Mostly EBM based	<input type="radio"/>		<input type="radio"/>
New and Important: this would change practice for most EPs This is a "must know" for EPs	<input type="radio"/>	No concerns over inaccuracies	<input type="radio"/>	Yes, there are multiple KEY educational pearls that residents should know before graduating	<input type="radio"/>	Yes exclusively EBM based (unbiased)	<input type="radio"/>	Yes	<input type="radio"/>
Your Score	5		6		6		1		1

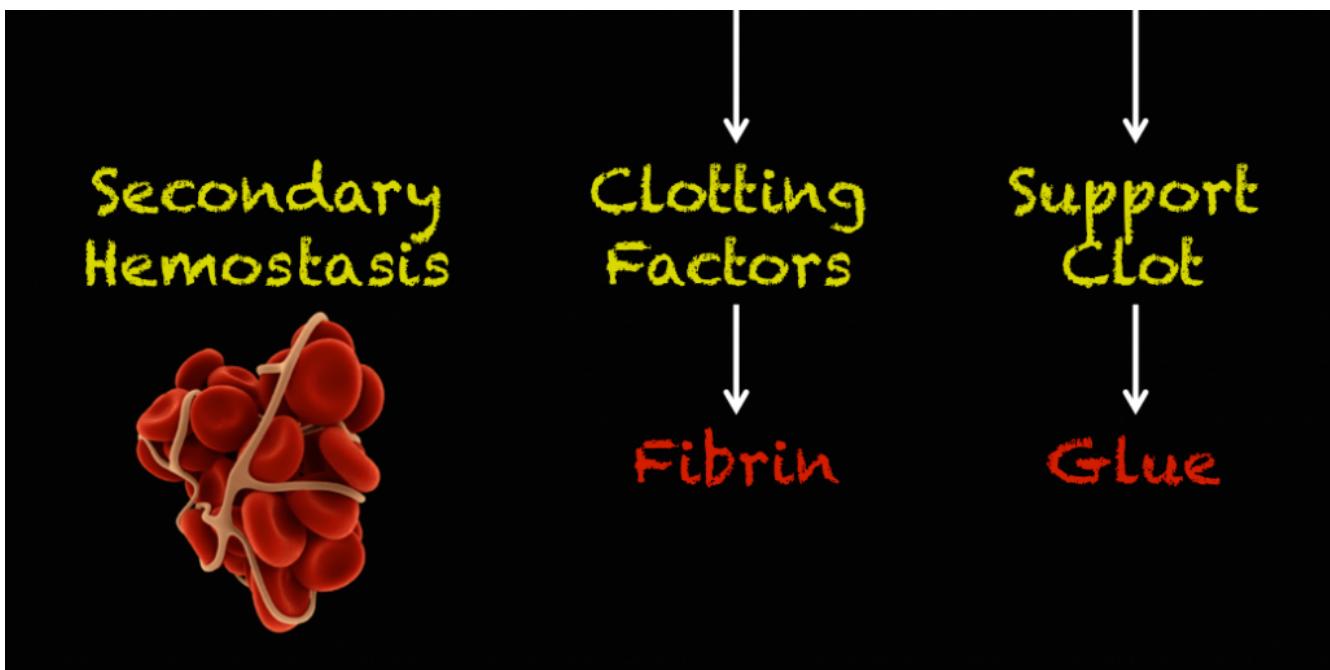
Hemophilia (R.E.B.E.L. EM 4/13/16, authored by Salim Rezaie) - Reviewed by

Autumn Pattee

A practical approach to the basics and treatment of hemophilia (not literature review)

- The basics of clot formation can be broken down into:
 - Endothelial injury: release of von Willebrand factor, which in turns allows platelet binding
 - Primary hemostasis: platelet function (aggregation forms initial "plug")
 - Deficiencies cause superficial bleeding (ecchymosis, petechiae, purpura)
 - Secondary hemostasis: clotting factors and coagulation cascades
 - Deficiencies cause deep bleeds (hemarthrosis, deep muscle bleeding)
 - Fibrin: the last step (the glue that keeps the clot together)





- Hemophilia:
 - X-Linked recessive disorder
 - Two main types: A (factor VIII) and B (Factor IX)
 - Both affect intrinsic pathway (as above) and platelet counts and bleeding time are typically normal
 - Both types typically have a prolonged PTT but normal PT
 - Hemophilia A (classic hemophilia)
 - Comprise 80% of hemophilia cases, affects 1 in 5,000 male births
 - Hemophilia B (Christmas disease)
 - Accounts for 20% of hemophilia cases, affects 1 in 30,000 male births
 - Acquired Hemophilia
 - Patients with inhibitors to clotting factors
 - JW note - There are other types though much rarer and not covered here.
 - Characteristics are Indistinguishable between the two major types of hemophilia
 - Most commonly easy bruising, recurrent bleeding esp joints and deep muscles
 - Hemarthrosis is the most frequently occurring complication: elbows, knees, ankles
 - Often pain before bleeding
 - Intracranial hemorrhage is the most common noninfectious cause of death
 - For any trauma patient with underlying hemophilia diagnosis with prompt factor replacement
- Factor Replacement: Mainstay of Treatment for Hemophilia
 - Primary prophylaxis vs secondary prophylaxis

- Primary
 - Scheduled dosing of factor replacement to reduce risk of spontaneous bleeding in severe disease
- Secondary
 - Factor replacement based on acute need – injury/trauma or pre-surgical
 - ALWAYS USE WHAT KIND OF FACTOR PATIENT USES! (may have it with them)
- Factor VIII
 - Each U/kg = increase of factor by 2%
- Factor IX
 - Each U/kg = increase of factor by 1%
- Other treatments
 - Not ideal but use if needed
 - Factor VIIa
 - Cryoprecipitate
 - DDAVP
 - FFP
 - Prothrombin Complex Concentrates
- Treatment Calculations:
 - You need to know two things: severity of their disease and the severity of their bleed
 - Severity of disease classified by patient's factor level
 - Normal, Mild, Mod, Severe
 - Two options: patient knows their factor level OR if they don't know it, you assume it's 0%
 - Severity of Bleed
 - Mild to Mod
 - Soft tissue, muscle hemarthrosis, epistaxis
 - Plan to give factor replacement up to 50%
 - Severe
 - CNS, GI, neck/throat, major trauma
 - Factor replacement up to 100%
 - Units of Factor VIII Required
 - Patients Weight (kg) x 0.5 x (% Activity Desired – % Intrinsic Activity)
 - If 0% activity, 50U/ kg
 - Units of Factor IX Required
 - Patients Weight (kg) x 1.0 x (% Activity Desired – % Intrinsic

Activity

- If 0% activity, 100U/ kg

- Evaluations

- [Blog Checklist](#)

- The content is independent from sponsors, conflict of interest, and other sources of bias. He stated at the beginning it was a summary from a lecture he gave his current residents.
- There were no advertisements within the content listed.
- Author was free of financial conflicts of interest.
- The identify of the author was clear.
- He listed all references used.
- The author is not a hematologist, but a practicing EM physician who also is involved in educating current residents.
- No comments from other learners, but he did mention Dr. Swaminathan peer-reviewed it before he made it public on the site.

- [AIR Grade:](#)

Tier 1: BEEM Rater Scale	Score-choose only 1	Tier 2: Content accuracy	Score-choose only 1	Tier 3: Educational Utility	Score-choose only 1	Tier 4: EBM	Score-choose only 1	Tier 5: Referenced	Score-choose only 1
Assuming that the results of this article are valid, how much does this article impact on EM clinical practice?		Do you have any concerns about the accuracy of the data presented or conclusions of this article?		Are there useful educational pearls in this article for residents?		Is this article reflect evidence based medicine (EBM) and thus lack bias?		Are the authors and literature clearly cited?	
Useless information	<input type="radio"/>	Yes, many concerns from many inaccuracies	<input type="radio"/>	Low value: No valuable pearls	<input type="radio"/>	Not EBM based, only expert opinion (and thus more biased)	<input type="radio"/>	No	<input type="radio"/>
Not really interesting, not really new, changes nothing	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input checked="" type="radio"/>		<input type="radio"/>
Interesting and new, but doesn't change practice	<input type="radio"/>	Yes, a major concern about few inaccuracies	<input type="radio"/>	Yes, but there are only a few (1-2) valuable or multiple (>=3) less-valuable educational pearls	<input type="radio"/>	Minimally EBM based	<input type="radio"/>		<input type="radio"/>
Interesting and new, has the potential to change practice	<input checked="" type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>
New and important: this would probably change practice for some EPs	<input type="radio"/>	Minimal concerns over minor inaccuracies	<input type="radio"/>	Yes, there are several (>=3) valuable educational pearls, or a few (1-2) KEY educational pearls that every resident should know before graduating	<input type="radio"/>	Mostly EBM based	<input type="radio"/>		<input type="radio"/>
New and Important: this would change practice for most EPs This is a "must know" for EPs	<input type="radio"/>	No concerns over inaccuracies	<input type="radio"/>	Yes, there are multiple KEY educational pearls that residents should know before graduating	<input type="radio"/>	Yes exclusively EBM based (unbiased)	<input type="radio"/>	Yes	<input checked="" type="radio"/>
Your Score	4		5		4		2		7

[Tumor Lysis \(EMDocs 8/6/16, authored by Chris Belcher and Rob Rogers\)](#) -

Reviewed by Shannon Tomfohrde

- Tumor Lysis Syndrome (TLS) – Oncology emergency
 - Most common in hematologic cancers, but can occur in solid tumor diseases
 - Spontaneously in cancers with high proliferative rates
 - Most common after chemo
- Diagnosis
 - Lab findings of TLS
 - Hyperkalemia
 - Hyperphosphatemia
 - Hyperuricemia (breakdown of nucleic acids)

- Hypocalcemia (calcium-phosphate creation)
- Demographics
 - Patients who recently started chemo
 - Patients with newly diagnosed leukemia or lymphoma
- Symptoms
 - Often vague
 - Nausea, vomiting, diarrhea, anorexia, lethargy, hematuria, arrhythmias, cramps, seizures, other non specific.
- **Key point – extended electrolyte panel for patients at risk for TLS and vague complaints**
- Treatment
 - Hyperkalemia
 - Most immediate life-threatening
 - EKG
 - Calcium if there are EKG changes
 - Shift, excrete
 - Low threshold for dialysis if not responding to usual treatment
 - Hyperuricemia
 - High volume IV fluid (goal UOP 100mL/m²/hour)
 - 1.5 times maintenance fluid
 - Allopurinol
 - Decrease uric acid production
 - Rasburicase
 - Decrease uric acid levels
 - Converts uric acid to allantoin which is water soluble
 - Contraindicated in G6PD deficiency
 - Possibly alkalinize the urine...
 - No data to support
 - May promote calcium phosphate deposition and worsen renal function
 - Probably not recommended at this time
 - Hyperphosphatemia
 - Indications and usage of phosphate binders should be discussed with nephrology
- Dispo
 - Admit with oncology and likely nephrology on board
- Evaluations

- [AIR Grade:](#) 2,7,4,1,7

PESIT (Blog) & (Podcast) (R.E.B.E.L. EM 10/24/16, authored by Salim Rezaie)-

Reviewed by Sarah Baker

- [The PESIT Trial](#): Do All Patients with 1st Time Syncope Need a PE Workup?
- Introduction
 - Syncope represents 3-5% of ED visits, 1-6% of hospital admissions, 6th most common cause of hospitalization in patients > age 65
 - Prandoni P et al. **Prevalence of Pulmonary Embolism Among Patients Hospitalized for Syncope.** NEJM 2016; 375(16): 1524 – 31
 - Laypress Headline: "1/6 admitted patients with syncope had a PE"
 - If true, this would be a huge paradigm shift for our evaluation of syncope.
- Study overview
 - Multicenter, cross-sectional study from 11 hospitals in Italy
 - 2584 patients screened total; 157 excluded
 - 560 patients enrolled who were admitted to the hospital for syncope
 - All patients risk-stratified via modified Wells +/- D-dimer
 - 97 patients were found to have PE; prevalence of 17% or 1/6 admitted patients
 - Results (closer detail)
 - 1857 patients were either not admitted or declined hospitalization (72%)
 - 560 included patients in the actual study (all were admitted)
 - PE ruled out via Wells + D-dimer in 330/560 patients (60%)
 - PE ruled in 97/230 patients (42%)
 - What type of PE?
 - 5/72 PE's were sub-segmental
 - Strengths
 - Multicenter
 - Did use validated algorithm based on clinical pretest probability to determine presence or absence of PE
 - Limitations
 - None of the discharged patients (72%) were included in the study
 - Patients admitted had a mean age in the 70's, multiple co-morbid conditions
 - Why wasn't an ED workup initiated for PE in the ED for patients with tachycardia, tachypnea, signs of DVT?
 - Podcast authors stated that it seemed as though the ED physicians in this trial just admitted patients who were old, sick, hypotensive, tachycardic, tachypnic, with signs/symptoms of DVT without initiating any workup and asking the inpatient physicians to pursue workup
 - Many patients found to have PE in this study would likely have had a PE

diagnosed by any adequate ED physician

- Unclear significance of PE's identified

- Discussion

- *Blog conclusion: In a subgroup of older, sicker patients presenting with syncope, we found a prevalence of 17% for PE.*
- Were PE's causal or "innocent bystander"?
 - Is this truly the prevalence of PE at baseline in this patient population?
- *Blog author: "PE was identified in 97/2484 of patients presenting to the ED with **undifferentiated** syncope." as many patients were discharged straight from the ED.*
 - 3.9% prevalence when looking at 97/2484 total patients presenting with syncope
 - This should have likely been the emphasis of the study conclusions
- There has been so much emphasis on controlling PE workup over the past 5 years
 - The concern is that this study could cause physicians to pursue unnecessary workup for PE
 - We will find more inconsequential findings, start unnecessary anti-coagulation, cause unnecessary side effects
 - This will also possibly stress resource utilization in the ED
 - flow, radiation, cost

- Conclusions

- Look at the methods of the study!
- Look at the inclusion/exclusion criteria

- ***Bottom line: This study should not change our management. If you have a patient who presents with signs/symptoms of PE in the setting of syncope and you have high clinical suspicion, by all means—do the work-up! We do know that PE is on the differential for syncope. Don't scan an undifferentiated bunch of patients with syncope, scan them all, and find a bunch of inconsequential PE's!***

- Evaluation

- AIR Grade:

Tier 1: BEEM Rater Scale	Score-choose only 1	Tier 2: Content accuracy	Score-choose only 1	Tier 3: Educational Utility	Score-choose only 1	Tier 4: EBM	Score-choose only 1	Tier 5: Referenced	Score-choose only 1
Assuming that the results of this article are valid, how much does this article impact on EM clinical practice?		Do you have any concerns about the accuracy of the data presented or conclusions of this article?		Are there useful educational pearls in this article for residents?		Is this article reflect evidence based medicine (EBM) and thus lack bias?		Are the authors and literature clearly cited?	
Useless information	<input type="radio"/>	Yes, many concerns from many inaccuracies	<input type="radio"/>	Low value: No valuable pearls	<input type="radio"/>	Not EBM based, only expert opinion (and thus more biased)	<input type="radio"/>	No	<input type="radio"/>
Not really interesting, not really new, changes nothing	<input checked="" type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>
Interesting and new, but doesn't change practice	<input type="radio"/>	Yes, a major concern about few inaccuracies	<input type="radio"/>	Yes, but there are only a few (1-2) valuable or multiple (>=3) less-valuable educational pearls	<input type="radio"/>	Minimally EBM based	<input type="radio"/>		<input type="radio"/>
Interesting and new, has the potential to change practice	<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>		<input type="radio"/>
New and important: this would probably change practice for some FPs	<input type="radio"/>	Minimal concerns over minor inaccuracies	<input type="radio"/>	Yes, there are several (>=3) valuable educational pearls, or a few (1-2) KFV	<input type="radio"/>	Mostly EBM based	<input type="radio"/>		<input type="radio"/>

New and Important: this would change practice for most EPs This is a "must know" for EPs	<input type="radio"/>	No concerns over inaccuracies	<input checked="" type="radio"/> <small>multiple KEY educational pearls that every resident should know before graduating</small>	<input type="radio"/>	Yes, there are multiple KEY educational pearls that residents should know before graduating	<input type="radio"/>	Yes exclusively EBM based (unbiased)	<input type="radio"/>	Yes	<input checked="" type="radio"/>
Your Score	2	6	5	6	6					6

Edited by Brian Hahn, Zlata Vlodaver, Matt Bogan and Joe Walter

Evernote makes it easy to remember things big and small from your everyday life using your computer, tablet, phone and the web.

[Terms of Service](#) | [Privacy Policy](#)