



FOAM & Education Newsletter

July 2021
Volume 10



Welcome to Rez's #FOAM Newsletter

This is a monthly newsletter brought to you by the Education Committee with the latest in the EM and FOAMed world, ranging from trials, news, and pearls. We will also share the best podcasts & blog posts recently published in FOAM. If you have an interesting image or EKG to share, let us know!

Your 21-22 Education Committee:

Lola Reingold (chair)

Walid Malki

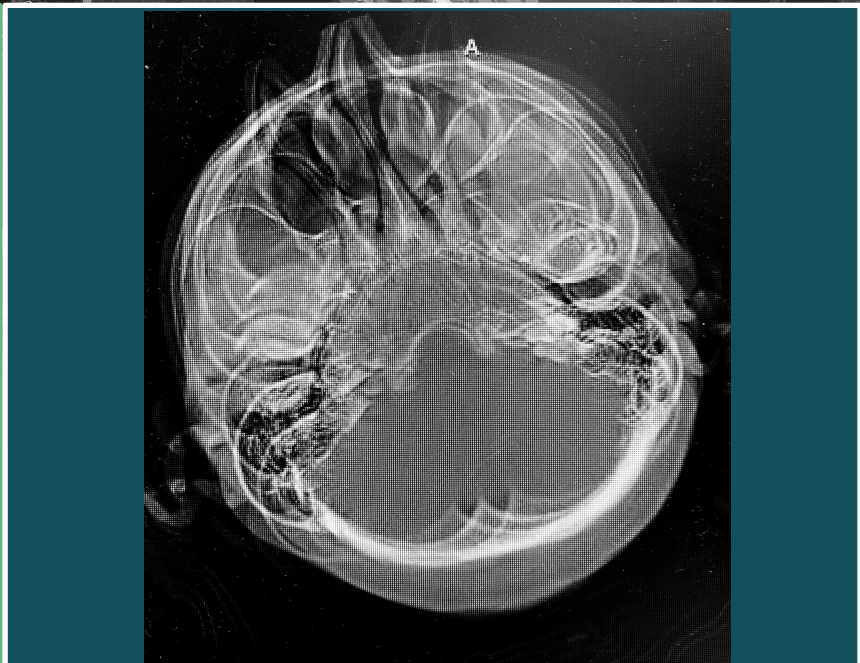
Colton Weisner

Jake Cihla

Yalan Vu

Will Noel

Omar



JULY FOAM UPDATES:

PODCAST OF THE MONTH:

[Internet Book of Critical Care: Atrial Fibrillation](#)

POCUS OF THE MONTH:

PENG block

PROCEDURE OF THE MONTH:

[RSI & Laryngoscopy Review by MDAware](#)

Wilderness Reminder: Tick-Borne Disease

- In Illinois, **tick-borne disease is becoming more common**
- Populations continue to increase across both the state and country.
 - Incidence of Lyme Disease bacteria *Borrelia burgdorferi* in ticks is **20-30% on average but can be up to 70%**
- Coinfection amongst ticks is common
- List of common and less common but growing tick-borne illness
 - Deer Tick: Lyme Disease, Anaplasmosis, Babesiosis, Ehrlichiosis, Powassan Virus, *Borrelia Miyamotoi*
 - Lone Star Tick: Red meat allergy, STARI, RMSF, Tularemia
 - Wood Tick: Tularemia, RMSF
- **Typical symptoms** of tick-borne disease: arthralgia, malaise, fever/chills, headache, rash, recurrent episodes of symptoms
- **Lab findings** can include leukopenia, elevated liver enzymes (mild or moderate), thrombocytopenia
- First-line is usually doxycycline; ceftriaxone is generally an acceptable alternative
- **Prophylaxis recommendations:** if confirmed deer tick bite, consider a one-time dose of 200mg doxycycline.

Lone star



Female ticks have a white dot or star on their back.



Approx. size

Wood (American dog)



One of the most common types of ticks in Wisconsin.



Approx. size

Deer (Blacklegged)



Deer ticks are known to transmit Lyme Disease.



Approx. size

Conservative vs Interventional management for moderate-to-large spontaneous pneumothorax

by Jake

Study Design

- 316 patients randomized Conservative or Intervention groups

Intervention

- Small-bore pigtail inserted → CXR 1 hour later
- If PTX resolved, tube clamped for 4 hours and observed
- If PTX absent on CXR @ 4hrs, tube removed, discharged
- If above criteria not met, patient admitted

Conservative Management

- Observed for 4 hours after initial CXR
- If PTX stable, VSS, and no O2 given, patient discharged
- If above criteria not met, pigtail placed

Follow Up

- 1 and 3 days; 2, 4, and 8 weeks for PTX recurrence on CXR

Conclusions

- Modest, but statistically fragile, **evidence that conservative management was non- inferior to interventional management for radiographic resolution within 8 weeks.**
- Time until complete resolution of symptoms did not differ substantially between the two approaches.
- Conservative management
 - Spared 85% of the patients from an invasive intervention
 - Resulted in fewer hospitalization days, a lower likelihood of prolonged chest-tube drainage, less need for surgery, and fewer adverse events and serious adverse events than intervention.
- Percentage of patients with early pneumothorax recurrence was also lower in the conservative-management group.

Brown SGA, Ball EL, Perrin K, et al. Conservative versus Interventional Treatment for Spontaneous Pneumothorax. *New England Journal of Medicine*. 2020;382(5):405-415. doi:[10.1056/NEJMoa1910775](https://doi.org/10.1056/NEJMoa1910775)

US of the Month: Pericapsular Nerve Group (PENG) Block

By Yalan

Indications: femoral neck, intertrochanteric, pubic ramus, or acetabular fractures and hip dislocations.

- Above the intertrochanteric line: PENG
- Below: fem or fascia iliaca block

Target: subfascial plane underneath the psoas tendon and above the ilium

How: place a curvilinear probe at an oblique angle, inferior but parallel to the inguinal ligament with indicator to the patient's right. Identify the femoral head (Image B).



Image B: Identification of left femoral head (FH). Also note the femoral artery (FA) medial to the FH.

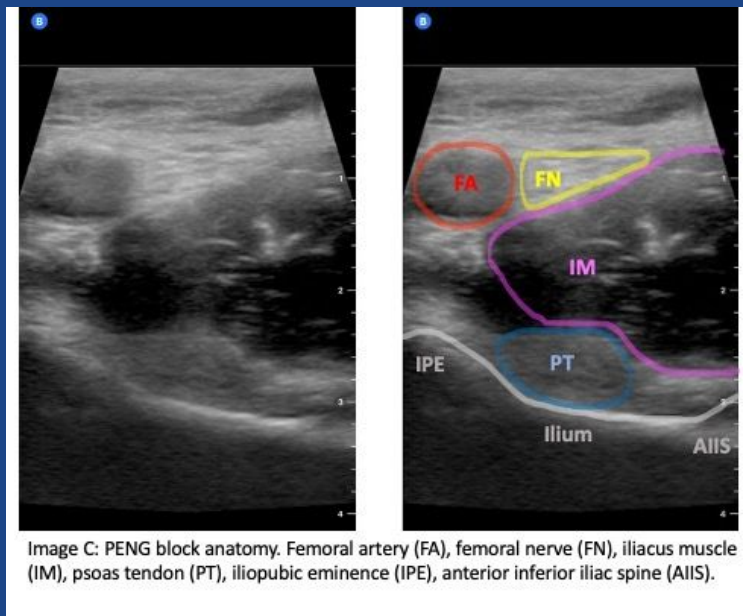


Image C: PENG block anatomy. Femoral artery (FA), femoral nerve (FN), iliacus muscle (IM), psoas tendon (PT), iliopubic eminence (IPE), anterior inferior iliac spine (AIIS).

Slide cranially, following the path of the inguinal ligament, until the anterior inferior iliac spine (AIIS) and iliopubic eminence (IPE) of the ilium are visualized (Image C).

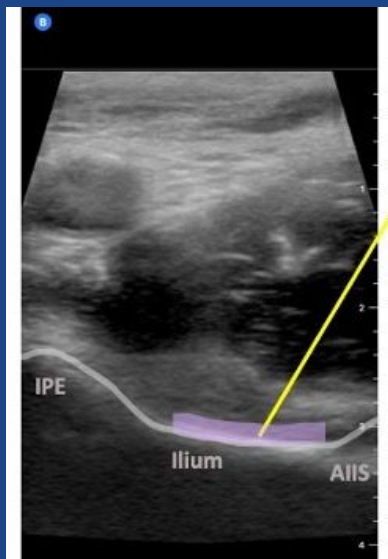


Image D: Needle approach (yellow line) lateral-to-medial targeting under the psoas tendon (lavender line)

Identify the femoral artery, femoral nerve, iliacus muscle and psoas tendon.

Insert your needle in plane, using a lateral-to-medial approach, until contact with the ilium is made underneath the psoas tendon (Image D).

Hydrodissect the fascial plane using saline to visualize the correct location before injecting 20 CCs of long-acting anesthetic, such as ropivacaine

The Relationship Between Heart Rate and Body Temperature in Critically Ill Patients: EM Resident Magazine

by Walid

Goal of study: Determine the relationship between heart rate & body temperature in critically ill adult patients

Study Design: Single center, cross sectional, retrospective analysis of prospectively collected data, 9,046 patients (56.3% male, mean age 54 ± 21 yr)

Conclusions: In critically ill adult patients for **each 1° C increase in body temperature** there is an associated **8 beat/min increase in heart rate.**