PERC rule: low risk (<1.8%) if

1. age <50
2. HR <100
3. O_2 sat > 94%
4. No unilat leg swelling
5. No hemoptysis
6. No surg/trauma in past 4wks
7. No hx of DVT/PE
8. No estrogens (even vaginal)

Well's Criteria for DVT:

1. Active cancer (tx w/in last 6mos)
2. Unilat calf swelling (>3cm diff.)
3. Swollen unilat superfic veins
4. Unilat pitting edema
5. Hx of documented DVT
6. Swelling of entire leg
7. Local TTP along DV sys
8. Paralysis, paresis or recent cast
9. Major surg or bed-ridden in 12 wks
10. Alt dx at least as likely

*d-dimer if low pre-test prob

Well's Criteria for PE:

1. Clinical signs + symptoms of DVT
2. "PE is #1 dx or equally likely"
3. HR > 100
4. Immobilization x 3/7 OR Surgery past 4/52
5. Previous, objectively dx'd PE or DVT
6. Hemoptysis
7. Malignancy wishing 6/12 OR palliative

GCS:

Motor:
6 – follows commands
5 – localizes pain
4 – nonpurposeful movement to pain
3 – flexes upper ext to pain
2 – extends all ext to pain
1 – no response to noxious stim

Verbal:
5 – orientated x3
4 – converses but confused
3 – replies w/ inapp words
2 – makes incomprehensible sounds
1 – no response

Eyes:
4 – spontaneously
3 – to speech
2 – to pain
1 – no eye opening

Canadian CT Head: (GCS 13-15)

1. age>65
2. signs depressed skull #
3. signs basilar skull #
4. ≥2 episodes emesis
5. GCS < 15 at 2 hrs
6. >30min of amnesia before impact
7. dangerous mech

AFib
- unstable or < 48hrs: sync cardiovert (200J)
- >48hrs, stable and narrow: diltiazem 0.25mg/kg IV over 2mins
- if wide complex use procainamide 15mg/kg over 30min
- medicine to see

Cardioversion:
AF: start 100-200J, then ↑ to 360J
AFlut/SVT: start 50J, then ↑ to 100J
VT with pulse: 50-100J, then ↑ to 200J

Acute MI:
ASA 160mg chewed
ticagrelor 180mg or plavix 300-600mg
fonda/enox/UFH
STEMI? – PCI + stent (<24hrs) or TNK (<12hrs)
Nitro 0.4mg sl q3-5mins (caution in inf. STEMI)
morphine 2-4 mg q3-5mins
15 lead: Consider RV/post involvement if inf. MI or STD in V_1-V_3

Sgarbossa Crit. (use LBBB or paced)
-LBBB by itself not a STEMI equivalent
- if hemodyanamic instab. or acute CHF then STEMI equiavlent
A. concordant STE in any lead (>1mm)
B. concordant STD in V1-V3 (>1mm)
C. discordant STE with ratio > 25%

Stroke Mx:
- check glucose.
- CT Head – r/o bleed
- consider t-PA if ischemic stroke w/in 4.5hrs
  - CAEP does not recommend or condemn the use of tPA.
- if no t-PA, give ASA 160-325mg PO chewed
- permissive HTN

Syncope:

Cardiac	Hemorrhage	Others
Arrhythmia	GI	Meds
MI	Ectopic	Orthostasis
Valvular Dz	AAA	PE
WPW	Trauma	SAH
Brugada		
HOCM		
LQTS		

Uncomplicated UTI
Can be treated without dip or culture if convincing. Treatment will be finished before culture results are in.
Septra DS 1 tab BID x 3/7
Macrobid 100mg BID x 5/7

Pneumonia (CAP):
Confusion, RR ≥ 30, sBP<90, age >65
* score: 0: OP tx; 1-2: consider; ≥3 inpt tx
* if O_2 sat < 92% consider admission

Meningitis:
Empiric tx: vanco + ceftriaxone.
Add ampicillin if EtOH/age>50/immunodeficient

Bacterial: >1000 WBC/mm^3, gluc decr, prot incr
Viral: <100 WBC/mm^3, lymph, gluc N, prot incr

Migraine Mx:
IV fluids
metoclopramide 10mg IV
ketorolac 30-60mg IV (d/c with NSAID)

Renal Colic Mx:
UA, imaging
U/S can't see stone, but can see clinically-relevant hydronephrosis
analgesia (NSAID +/- opioid)
tamsulosin 0.4mg PO QHS x 28d (evidence?)
?abx: ie. cipro 500mg PO BID

Acute Psychosis/Agitation
olanzapine 10-15mg PO/IM
haldol 5mg + lorazepam 2mg PO/IM/IV
benztropine 0.5-2mg PO/IM/IV for dystonia

Lacerations
Max dose 1% lidocaine:
- With epi = 7mg/kg = 50cc; lasts 2-6h
- w/o epi = 5mg/kg = 30cc; lasts 45-60 mins

How long should sutures stay in situ?
Face = 5 days
Most areas = 7-10 days
Over joint = 14 days

DKA Tx
Lab def'n of DKA:
- BG > 14, ketosis, pH < 7.3, bicarb < 18

In DKA, there is increased urinary excretion of K as well as insulin-mediated shift of K to the ECF. So, while hydration and insulin are mainstays of treatment, you must be careful not to drive the patient into hypokalemia

Aggressive IV fluid resuscitation, AND
K < 3.3, no insulin, give 40mmol KCl
K 3.3-5.2 give insulin regular with 20mmol KCl
K > 5.2, can just give insulin
If BG < 16, give glucose alongside insulin

Resolution: Bicarb > 15, pH > 7.3, anion gap closed, glucose < 11.1

Status Epilepticus
Airway, IV access
Stat labs (glucose/na/cr/drug levels/ca)
100mg thiamine IV
1 amp d50
Terminate seizure
First try ativan (give PR diazepam if no IV)
Then phenytoin, Then phenobarb
Then GA with propofol (If under GA need emergency EEG to r/o non-convulsive status)

Anaphylaxis
ABCs
Epinephrine is far more important than any other drug in anaphlaxis. Give 0.5mg IM
After that, can give prednisone, benadryl, ranitidine and/or ventolin

Ten Emergency Medicine Rotation Tips From an EM PGY3

1. Take all advice with a grain of salt, including the advice written here.
2. **Own your patients.** Know them well and make sure you follow-up on their labs/imaging in a timely manner. Since you will be caring for multiple patients concurrently, a **tracking method** is super useful. I take a sticker from each patient chart I'm managing and stick it in a clipboard or notebook I keep with me. This lets me make running to-do lists ("f/u CXR" "r/a post-ventolin" "consult medicine") right on the page, and the page can be thrown in the confidential bin at the end of shift. Having a system helps you make sure you understand and remember everything that needs to be done for all your patients.
3. At the end of presenting your patient assessment to your supervisor, they will invariably ask you some variation of the following two questions: **"What do you think is going on**, and **what do you want to do?**". Ask yourself these questions before someone else does. Another helpful question to know the answer to: **"Where is this patient going?**". (i.e. discharge now or after xyz test vs. possible consult vs. almost certain admission). These questions are helpful because they will help you figure out what the most efficient/useful first steps of your care might be.
4. We have all seen patients in the ED who probably don't need to be in the ED. Try to resist the urge to be flippant or dismissive. In the real world, these are as much your patients as the trauma/ACS/laceration patients and, until they walk out your door, you are their doctor. **Make sure all your patients have a good doctor, not just the "fun" ones.**
5. If you wanna invest in gadgets to keep with you while on shift, I recommend a cheap penlight and a cheap pair of trauma shears. These are handy but not crucial. One of the best "tools" you can bring is a sizeable volume of good-enough pens.
6. From a coffee lover: do not underestimate the power of keeping a water bottle on the go to get you through an 2300-0700 shift. Thoughts of an unhealthy post-shift breakfast can also be quite motivating.
7. If a nurse is giving you pushback about one of your orders, **listen to what they have to say**. I have stopped counting the number of times a nurse's question/suggestion/concern about my orders has saved me and my patient's bacon.
8. **Ask for help.** I am a PGY3 in Emergency Medicine, and if I have serious concerns about my patient, I have **zero qualms** about pulling a staff out of a room to get help. I have also never had a staff be angry with me about doing that, even in situations where things were less acute than I initially thought they were. If you are concerned, let someone know. If you are being asked to do something that you know you don't know how to do, let someone know. Your staff is way more reassured by you being **openly safe and teachable** than by you trying to minimize the appearance of your knowledge gaps.
9. If you see someone else doing a procedure you find interesting, **ask them** if you can assist or observe. The answer will almost invariably be "yes".
10. Although it's really more of an expectation than a tip, **being nice to everyone you meet in the ED** will serve you very well in the long run, I promise you.

Please feel free to ask me any questions you can think of, even the little ones, and even the general/non-emerg questions. I would be humbled if you considered me a general resource during your clerkship. My email address is jgabriel@mun.ca and you can text me at 647-965-2563.

The ED cheat sheet on the opposite side was adapted by me from a sheet made by the fantastic Dr. Lincoln Foerster. Again, take it with a grain of salt as an unvalidated resource and let me know if you find any errors.

All the best on this and future rotations.

-Joe

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