Emergency Procedures: Tricks of the Trade

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On the front lines:
Speed and efficiency are paramount in the ED

Case-based scenarios
• Chest tubes
• Head & neck
• Orthopedics
• Rectal prolapse
• Vascular access
• Wound care

Case 1
20 y/o seat-belted woman in MVC with airbag deployment c/o:
Bleeding scalp
Eye pain
Tooth avulsion
Abdominal pain

You find a parietal scalp laceration.
How do you avoid missing a 2nd scalp laceration?

Good lighting is the key!
LED flashlight

You find a parietal scalp laceration.
How do you avoid missing a 2nd scalp laceration?
You find a parietal scalp laceration.

How do you avoid missing a 2nd scalp laceration?

Manual palpation of the scalp

You find a parietal scalp laceration.

How do you irrigate the wound?

You find a parietal scalp laceration.

How do you irrigate the wound?

Thanks to Dr. Gemma Morabito (Italy)

Can I avoid using staples for the scalp laceration?

Modified Hair Apposition Technique (HAT) trick

- Uses opposing hair strands + adhesive
- One full 360° revolution twist of hair
- Apply adhesive at twisting point
- Repeat this along length of wound
- Do NOT over-twist the hair.
- Do NOT tie a knot.
- Good for less reliable patients

Contraindications:
- Laceration >10 cm long
- Grossly contaminated wounds
- Active bleeding
- Significant wound tension

How to retract the patient’s swollen upper eyelid?
Examine the traumatized eye early because of progressive swelling.

How to retract the patient’s swollen upper eyelid?
“Roll up” the upper eyelid with Q-tip

How to retract the patient’s swollen upper eyelid?
“Roll up” the upper eyelid with Q-tip

The eyelids are too swollen to allow Q-tip retraction.
Now what?

Paperclip retraction

The patient fortunately brought in her avulsed tooth, which you gently clean and reimplant.

How do you secure the tooth in place?
How do you secure the tooth in place?

Tissue adhesive
Nasal bridge from N95 respirator mask

Thanks to Dr. Hans Rosenberg (Ottawa)


How do you get a pregnancy test before CT?

Add 2-3 drops of whole blood in urine pregnancy well.
Wait full 5 minutes for result.

Sample well Test bar Control bar

Thanks to Dr. Joe Hablousche (NY Hospital-Queens) and Dr. Graham Walker (Stanford)

The patient has lower abdominal tenderness.
How do you get a pregnancy test before CT?

Test characteristics of whole blood in pregnancy kits:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>95.8%</td>
</tr>
<tr>
<td>Specificity</td>
<td>100%</td>
</tr>
<tr>
<td>Negative predictive value</td>
<td>97.9%</td>
</tr>
<tr>
<td>Positive predictive value</td>
<td>100%</td>
</tr>
</tbody>
</table>


Case 2

45 y/o morbidly obese man hit by car while crossing street presents with:

- Hypotension
- No IV access

How do you find the femoral vein?

- Common pitfall: Not finding the true inguinal ligament landmark

How to find the femoral vein in a hypotensive patient?

- V-Technique

  - Inguinal Canal
  - ASIS
  - Pubic Tubercle
  - Femoral Vein
You identify a hemopneumothorax. You are having trouble inserting the chest tube through the subcutaneous tissue.

Use a bougie like a stylet

Thanks to Dr. Seth Trueger (Mount Sinai) and Dr. Charles Maddow (UT Houston)
Images courtesy of Dr. Graham Walker (Stanford)

Other vascular access tricks

You are attempting a peripheral EJ line. The mandible keeps getting in the way of your IV.

You are attempting a peripheral EJ IV. The mandible keeps getting in the way.

You are attempting a central line. The guidewire doesn’t want to feed through the needle.

Thanks to Dr. Caitlin Bilotti (UCSF-SFGH chief resident)
You are attempting a central line. The guidewire doesn’t want to feed through the needle.

- Re-aspirate for blood
- Flatten needle angle
- Twirl guidewire

You are attempting a central line but lost the guidewire sheath.

How can you straighten the J-tip temporarily?

Wire coiled with an outer wire

How can you straighten the J-tip temporarily?

Can temporarily straighten J-tip by stretching guidewire

How can you straighten the J-tip temporarily?

Case 3

35 y/o motorcyclist crashes into a car, is thrown 30 feet and presents with: Multiple orthopedic injuries
You diagnose a 2\textsuperscript{nd} metacarpal fracture. How would you splint it?

- Traditional teaching: Volar wrist splint

You diagnose a 2\textsuperscript{nd} metacarpal fracture. How would you splint it?

- Trick of Trade: Radial gutter splint

You also find a distal radius fracture. How would you splint it?

- Traditional teaching: Sugar tong forearm splint

You also find a distal radius fracture. How would you splint it?

- Trick of Trade \#1: Cut slit at elbow to allow edges to tuck in more smoothly

You also find a distal radius fracture. How would you splint it?

- Trick of Trade \#2: REVERSE sugar tong splint

There is an anterior shoulder dislocation. How do you achieve pain control for the reduction?
How do you achieve pain control for the reduction?

*Intra-articular shoulder injection under ultrasound*

Thanks to Dr. Mike Stone (Highland)

There is an anterior shoulder dislocation.

How do you achieve pain control for the reduction?

There is an anterior shoulder dislocation.

There is an anterior hip dislocation as well.

How do you re-locate the hip?

There is an anterior hip dislocation as well.

How do you re-locate the hip?

Trick of Trade #1: Captain Morgan technique

How do you re-locate the hip?

Trick of Trade #1:
Captain Morgan technique

One hand has a ring stuck on a swollen finger.

How do you remove the ring?

Traditional teaching:
Lubrication and string coil technique

How do you remove the ring?

Tourniquet the finger and the ring

How do you remove the ring?

Wait 5-10 minutes and unwrap the finger

The hands have multiple deep abrasions.

How would you check for non-radiopaque foreign bodies?
**The hands have multiple deep abrasions.**

How would you check for non-radioopaque foreign bodies?

Use the ultrasound water bath technique.


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**The hands have multiple deep abrasions.**

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**One foot has multiple metallic foreign bodies.**

How would you remove these foreign bodies?

Use the ultrasound water bath technique.

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**One foot has multiple metallic foreign bodies.**

How would you remove these foreign bodies?

Use a rare earth magnet.

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**My alternative trick.**

Use the ultrasound water bath technique.

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**My alternative trick.**

Use the ultrasound water bath technique.
Case 4

A patient presents with a rectal prolapse. How would you reduce it?

Apply sugar over the prolapse. Sugar osmotically draws edema out of the prolapse!

Summary

Procedures: Tricks of the Trade

Share your creative, time-saving tricks!

http://AcademicLifeinEM.blogspot.com