

- A full pad is probably about 250mL.
- Acetaminophen for uterine cramping is appropriate.
- In-flight medical emergencies happen at a frequency of about 1 in 600 flights.
- Say your thought process out loud - crowdsource when needed. Having extra resources is helpful.

Bleeding AV Shunt

Britt Guest and Nathaniel Coggins

Case: A 80-year-old woman was found down with an AV fistula. There was lots of blood at the scene, but no active bleeding when EMS arrived. The patient's GCS was 6 and she was being bagged. There was no obtainable blood pressure en route to ED. In ED, the patient's vitals were: BP 60/40 mmHg, heart rate 115 bpm, and O2 sat 92% with BVM respirations. Blood, platelets and FFP were given. With resuscitation, pulsatile bleeding begins at the fistula site.

- AV fistulas are high-flow, low-pressure systems.
- Typically bleeding can be controlled with direct pressure.
 - Options:
 - Applying pressure proximal and distal to the defect.
 - Inflating BP cuff over the systolic pressure.
 - Applying tourniquet.
- The goal is to apply the minimal amount of pressure necessary to stop bleeding.
- Alternate options to control bleeding:
 - Topical hemostatic agents (eg., TXA or gelfoam) combined with pressure.
 - Systemic medications
 - DDAVP: might help platelet function.
 - Protamine: may be useful if a patient recently received heparin.
 - TXA: no data to guide use.
- Defect repair
 - A purse string or figure-of-eight stitch can be placed at the bedside.
 - It will be easier to suture if holding pressure above and below the site to clear the field.
 - Vascular surgery may take the patient to the operating room for repair.

Related content:

CorePendum Dialysis Related Emergencies: <https://www.emrap.org/corependium/chapter/reck9WrXrNdQV2nf7/Dialysis-Related-Emergencies>

EM:RAP HD: Bleeding AV shunt: <https://www.emrap.org/episode/cursideconsult/curbside-consult>

Trauma Fundamentals: Vascular Trauma: <https://www.emrap.org/episode/trauma-em-fundamentals/vasculartrauma>

Woggle Technique

Al Sacchetti

- Problem: Persistent venous ooze around your central line insertion point.
 - Direct pressure helps, but it often persists.
 - Often a stitch is placed to help stem the bleeding, but the knot of the purse string suture can be annoying to remove.
- Instead use the woggle technique.
 - This is used in interventional radiology.
 - Place a suture through the skin but underneath the line, pull the ends up on both sides, and cut the needle off.
 - Twist the 2 loose strings together to make one string.
 - Get a stopcock and turn the lever so it is facing the sideport which leaves it open,
 - Take the two ends (twisting into one) and pass it through the open passage in the stopcock, push the stopcock against the skin and then turn the lever on the stopcock.
 - This cinches it down against the skin and stops the bleeding.
 - Leave this in place for 15-30 minutes and then go back and rotate the lever and reverse everything and the suture can be put out.
 - If it is still oozing, just rotate the lever again and seal it again.
 - Be careful to pass the needle underneath the catheter when placing the suture to avoid accidentally puncturing the catheter.
 - Can also use this for leaking HD grafts.