Manual Uterine Aspiration - Procedural Steps Handout

TEAMM Training, Education, & Advocacy in Miscarriage Management

Emergency Department MUA Indications:
- Miscarriage / EPL / early pregnancy loss ≤ 10wk gestational size + hemorrhage
- Less common:
  - retained POC post-abortion + hemorrhage
  - retained POC postpartum + hemorrhage
  - infection (perform if need to stabilize on way to OR or pre-transfer)
  - coagulopathy
  - patient desire for stable miscarriage

Materials:
- 10cc or 20cc control syringe + spinal (or long) needle + 1% lidocaine
- betadine + gauze
- metal speculum
- ringed forceps
- metal single-toothed tenaculum
- Pratt cervical dilators
- manual uterine aspirator
- cup or basin to send products of conception to pathology department

Micro-skills:
- **Paracervical block** (20cc of 1% lido w/without epi: 2cc at tenaculum + 9cc each at 4 & 8 o'clock at cervicovaginal junction - avoid uterine arteries at 3 & 9 o'clock)
- **Serial cervical dilation** (most patients with bleeding and EPL already have dilated cervix) - with sterile no-touch technique, dilate up to size of pregnancy measured on ultrasound, with cannula size equal to # weeks gestational age, use wrist flexion and extension only to safely dilate internal cervical os

Procedural Steps:
1. Administer doxycycline 200mg PO x 1 or azithromycin 500mg PO x 1
2. Administer misoprostol 800mcg buccally or rectally w/ antiemetics if brisk bleeding
3. Administer any systemic pain medication needed - suggest ketorolac 15mg IV +/- a benzodiazepine -OR- opiate (not both simultaneously unless plan for conscious sedation)
4. Place speculum, clean cervix with antiseptic solution
5. Anesthetize cervix at 12 o'clock w/ 2cc Lidocaine 1% and place tenaculum
6. Complete paracervical block
7. Dilate the cervix using the sterile ends of Pratt cervical dilators starting from smallest, increasing in size up to the size of the cannula that will be used to aspirate the uterus (based on size of pregnancy on ultrasound)
8. Gently insert appropriately sized cannula through cervix to uterine fundus
9. Activate vacuum on MUA device and connect to cannula
10. Release vacuum to aspirate uterus + slowly rotate 360 degrees w/ gentle in-and-out motion
11. Detach cannula, empty vacuum into sterile cup, and reinitiate vacuum
12. Repeat aspiration until feel gritty sensation and products of conception removed is decreasing
13. Remove tenaculum, examine cervix, remove speculum
14. Reassess 15 min later for bleeding, pain and hemodynamic stability

Complications are rare:
- Incomplete uterine evacuation - most common "complication"
- Hemorrhage (0.5-1%)
- Vasovagal reaction
- Infection (1-2%) - *same across all EPL treatment options*

- Uterine or cervical injury (uterine perforation very rare, increases with infection)
- Risk of intrauterine adhesions is rare (as no curettage used)

Recovery, discharge and follow up:
- Reassess 15 min after procedure for bleeding, pain, hypotension or tachycardia
- Rh negative patients need Rh Immune Globulin if pregnancy size 12wk or larger
- Discharge with instructions to return to ED for brisk vaginal bleeding soaking 2+ maxi pads/hr for 2+ hours, syncope, fever. Pts should expect light to moderate bleeding for up to 2 weeks
- Follow up with OBGYN or Family Medicine provider in approximately 2 wks for US or hcg confirmation
- Home pregnancy test completed 5 weeks post procedure should be negative
- No need to delay conception
- Ask if grief counseling is welcomed

Does MUA belong in emergency medicine? YES!:
- In ACEP's Policy Statement "Emergency Physician's Role in the Medication and Procedural Management of Early Pregnancy Loss," Sep 2024, ACEP encourages emergency physicians practicing in low-resource environments to obtain proficiency in medical and procedural management of early pregnancy loss, as these can be life-saving interventions
- MUA is a simple procedure, it's fast and safe, it provides definitive management for miscarriage in over 99% of cases, where medication and expectant management have higher rates of incomplete treatment requiring re-dosing medication or a uterine aspiration
- MUA in the ED can prevent OR use and hospital admissions. It also reduces ED bounce back visits for the same pregnancy by half and cuts treatment costs by 7x when compared to an admission for treatment in the operating room
- Conscious sedation is not routinely needed for MUA, though may be necessary on case-by-case basis

Resources for MUA education and training:
- University of Washington TEAMM website: www.miscarriagemanagement.org
- Access Bridge: https://bridgetotreatment.org/reproductive-health/access-bridge/
- ACOG Optimizing Care for EPL: www.acog.org/programs/optimizing-care-for-pregnancy-loss
- UCSF website: www.earlypregnancyresources.org
- HPSRx Enterprises (sole MUA distributor, TEAMM has no financial relationship): www.hpsrx.com
- Papaya Workshop Videos: www.papayaworkshop.org

References - short list:

- ACEP Policy Statement: Emergency Physicians' Role in the Medication and Procedural Management of Early Pregnancy Loss. Sept. 2024, https://www.acep.org/patient-care/policy-statements/emergency-physicians-role-in-the-medication-and-procedural-management-of-early-pregnancy-loss.
- "ACOG Clinical Practice Update: Rh D Immune Globulin Administration After Abortion or Pregnancy Loss at Less Than 12 Weeks of Gestation." Obstetrics and Gynecology, vol. 144, no. 6, Dec. 2024, pp. e140–43. PubMed, https://doi.org/10.1097/AOG.0000000000005733.
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