Managing Complications of Manual Uterine Aspiration for Early Pregnancy Loss

During MUA Procedure:

Vaginal bleeding

Signs of severe vaginal bleeding:

- Heavy, bright red, vaginal bleeding with or without clots
- Blood-soaked pads/chux at 250 cc loss of blood
- Pallor (especially of inner eyelids, palms or around the mouth and tongue)
- Dizziness/fainting

Control bleeding

If >250mL blood loss immediate post MUA:

- Give rectal misoprostol 800 mcg
- You may also give IM methergine 0.2mg, and consider also oral methergine 0.2 mg PO q 6 hours x 3-4 doses to take home
- Consider re-aspirating with the MUA – often emptying the uterus will stop the bleeding
- Replace lost fluids as needed – IV fluids

Determine cause of bleeding (*Ultrasound is VERY useful for this evaluation)

- Uterine atony
- Retained POCs/clots
- Lacerated cervix
- Perforated uterus
- Injury to vagina

Action step – as necessary

- Uterine massage
- Re-aspirate
- Repair any lacerations
- Transport to nearest emergency facility
    - Transfusion
    - Other surgery

Cervical Laceration

Superficial lacerations are common at the tenaculum site. These typically do not bleed much and are not worrisome. Lacerations at the internal os are more concerning. This complication is most likely to occur due to forceful cervical dilation. Treatment of cervical laceration at the os requires immediate repair and observation to assure the underlying blood vessels have not been damaged, leading to intrauterine or intra-abdominal bleeding. If you do not have the equipment or knowledge to repair this in your clinic, please call for immediate transfer of care.

Uterine perforation
If the cannula penetrates further than expected, or if fat, bowel or omentum is observed in the tissue removed from the uterus, the uterus has been perforated. (Careful examination to determine the position of the uterus and cervix is essential to avoid this complication).

Often times in the first trimester, the instruments used are so small, that no further damage is done and if there is minimal bleeding, a short period of extra observation and reassurance of a stable hematocrit may be all that is needed. However, uterine perforation can also damage internal organs and blood vessels. If uterine perforation is suspected, appropriate steps must be taken which include observation and possible surgery (laparoscopy and/or laparotomy).

If a perforation is found and the evacuation is complete:

Stable patient:

- Observe for 2 hours; check vital signs frequently; make arrangements for possible referral.
    - Assess for pain, orthostasis, decreasing hematocrit and abdominal rebound tenderness
- May give misoprostol 800 mcg PR or methergine 0.2 mg IM, repeat as needed up to 3 doses if no contraindications
- If stable and being discharged home, provide Rx for PO antibiotic, warning s/sx, 24 hour contact number and follow up instructions
- If the patient's condition worsens and bleeding does not stop with an increased dose of misoprostol, oxytocin or methergine, a laparoscopy or laparotomy may be necessary to locate and repair the source of the bleeding. Refer this patient to higher level of care.
- If concerned that you perforated and applied suction within the pelvic/abdominal cavity, consider transferring for further evaluation/observation.

If a perforation is found and the evacuation is not complete:

- Make arrangement for blood transfusion and/or transport for completion of the evacuation under direct visual control (laparoscopy or laparotomy) to assess damage to the uterus and to prevent injury to abdominal organs.
- Begin IV fluids and antibiotics
- Check the woman's hematocrit

<u>Vagal reaction or neurogenic shock</u>
Fainting is most likely to occur during cervical dilation/manipulation or scraping/manipulation of the uterine cavity. Due to stimulation of the vagus nerve, the heart rate and respiration decrease, leading to fainting (syncope). This condition usually lasts only a few seconds to minutes, provided the cause of the pain is stopped.

Treat by:

- Stopping the procedure immediately
- Maintaining an open airway
- Lower the head of the bed
- Turning the patient's head and shoulder to the side to prevent aspiration if she vomits
- Raising the patient's legs
- Administer smelling salts

If recovery is not immediate:

- Call an ambulance for transport to the nearest emergency facility, if needed.
- While you are waiting, you may start any of the following:
- Ventilate the patient with an Ambu bag using oxygen at 6-8L per minute
- Start an IV with a large bore (16-18 gauge) needle using either isotonic saline or Ringer's lactate solution.
- Check vital signs and monitor patient's recovery

<u>Fainting</u>

If fainting is not due to vagal reaction: determine underlying cause of shock:
(bleeding, infection, perforation)

In all cases:

- Evaluate signs of shock:
- Fast, weak pulse (> 110 per minute)
- Low BP (diastolic < 60)
- Pallor (especially inner eyelid, palms, tongue or around lips)
- Sweatiness
- Rapid breathing (respiration >30 per minute)
- Anxiousness, confusion or unconsciousness

Treat for shock:

- Check vitals
- Keep patient warm
- Turn patient's head to side, in case of vomiting: less likely to inhale vomitus
- Make sure airway is open. Give oxygen, 6-8 liters/minute by mask or nasal cannula
- Do not give fluids, medicine or food by mouth
- Raise patient's legs or the foot of the bed to help blood return to the heart. If this causes difficulty in breathing, lower legs and raise head to relieve fluid pressure on the lungs

If recovery is not immediate:

- Call an ambulance for transport to the nearest emergency facility, if needed.
- Ventilate the patient with an Ambu bag using oxygen at 6-8L/minute
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Managing Complications AFTER MUA Procedure:

Hematometra

- Accumulation of blood in uterus after the procedure resulting in cramping and pain (at 250-1500 ml blood) that increases after MVA procedure
- Pelvic exam reveals enlarged, firm and tender uterus
- Hypotension and vasovagal reactions can result from blood shift to uterus, pain and uterine distention
- Simple dilation may suffice to release trapped blood
- Re-aspiration will resolve symptoms

Infection

Signs & symptoms of infection

- Fever (temp >38° C or 100.4°F), chills or sweats
- Foul smelling vaginal discharge
- Lower abdominal tenderness (with or without rebound tenderness)
- Cervical mucopurulent discharge
- Cervical motion tenderness on bimanual examination
- Lower abdominal pain
- General discomfort (flu-like symptoms)

The treatment for an infected uterus/miscarriage **IS** uterine evacuation. You may not want to perform this as an MUA in the office, but use of electric suction in an operating room, depending on stability of the patient. You would also use more aggressive antibiotic regimen, such as amp/gent/clinda, or levofloxacin/metronidazole. You want to use antibiotics (IV/IM) that are effective against gram-negative, gram-positive, anaerobic organisms and Chlamydia.

If you have a patient using medication management and she comes in with a fever, immediately check her CBC. If she doesn't have a very high WBC count or very high HCT, she likely doesn't have c. Sordellii. You can treat this as you would a "normal" infection.

When patient should contact clinician

- Heavy vaginal bleeding that is soaking through more than 2 maxi-pads an hour for 2 hours or more in a row
- Heavy vaginal bleeding that continues 10 days after your procedure (light bleeding or spotting is OK)
- Clots that are consistently larger than a lemon
- A fever higher than 100.4°F (38°C)
- Painful cramps not relieved by ibuprofen (Advil, Motrin) or acetaminophen (Tylenol)
- Vaginal discharge that causes pain or itching, or smells bad
- Dizziness, lightheadedness, fainting
- Shaking with chills
- Flu-like symptoms lasting >24 hours
- Any questions

References:
National Health Training Center, December 2002, Postabortion Care, a Reference Manual for Improving Quality of Care, Second Edition
Management of Unintended and Abnormal Pregnancy: Comprehensive Abortion Care, 2009, National Abortion Federation