UCMC Intrauterine Fetal Demise Protocol

Revised 6/7/2023

Rationale

Intrauterine fetal demise (IUFD) is a common adverse pregnancy outcome, affecting 1 in 160 deliveries. We plan to standardize management of second and third trimester IUFD (at or above 14w0d) at our institution using current, evidence-based guidelines.

Diagnosis

Diagnosis of IUFD is made by ultrasound confirmation of lack of fetal cardiac activity. This can be confirmed by either official MFM ultrasound, or direct visualization of bedside ultrasound by two physicians. Documentation for a bedside ultrasound must include the names of the physicians who confirmed the IUFD, and the time and date the IUFD was confirmed. The note must be signed by the attending physician prior to initiation of management of IUFD. Full biometry should be attempted to provide a best estimate of gestational age and measurements documented in the note, and placental location should be documented.

Initial Workup

1. All patients should be offered workup for the etiology of IUFD (see Addendum item #1).
2. The patient should be offered autopsy and cytogenetics (see Addendum item #4).
3. All patients must be seen by the Office of Decedent Affairs (ODA) prior to discharge. ODA will complete the UCMC Authorization for Disposition of Fetal Remains, and the Confirmation of Miscarriage and Notice of Right to Fetal Death Certificate.
4. Once diagnosis of IUFD is confirmed, management offered to the patient is dependent on biometric measurements:
    a. If biometry is <24w0d composite, appropriate patients should be offered medical management with induction of labor (IOL) versus surgical management with dilation & evacuation (D&E) under ultrasound guidance. If the patient expresses interest in D&E, or desires more information about the procedure, a Complex Family Planning consultation should be requested.
    b. If biometry is >/= 24w0d, the patient will be offered medical induction of labor unless contraindicated (see special circumstances below).

Surgical Management

1. The physician will obtain informed consent for the D&E procedure. Risks will be reviewed with the patient, including bleeding/need for blood transfusion, infection, uterine perforation, retained products of conception, need for further procedures. If there is need for cervical preparation, the patient will also be counseled about this and written informed consent will be obtained.
2. A case request should be completed for either the Labor & Delivery (L&D) operating rooms or the UCMC operating rooms, based on availability. The L&D Charge Nurse will be notified, and the anesthesia team will be consulted.
3. Based on clinical judgment, preoperative misoprostol or osmotic cervical dilators may be used.
4. Preoperative misoprostol is typically used for measurements 14-16 weeks. Recommended regimen is 600mcg buccal 1.5 hours preop. This should be confirmed by the surgeon performing the procedure.
5. If osmotic cervical dilators are needed, patients should receive antibiotic prophylaxis, and should be offered pre-procedure analgesia.
6. The procedure will be completed by a physician trained in D&E, under ultrasound guidance.
7. Postoperatively, the patient will be monitored for a minimum of 2 hours. Depending on clinical status, the patient may be discharged the same day as the procedure.

Medical Management

1. Appropriately selected patients will be offered pre-induction mifepristone 200 mg, 24-48 hours prior to initiation of IOL (Allanson, et al). The patient will be counseled that this has been shown to decrease the total time of IOL. If the patient elects mifepristone, documentation and dispensation must be performed according to the Federal Drug Administration Risk Evaluation and Mitigation Strategies (REMS) protocol (see Addendum item #2).
2. Mifepristone may be administered in the OB ED, in a UCMC ambulatory facility (Center for Women's Health or Midtown), or any other location at UCMC. Medication is also approved for use at West Chester in patient, pharmacy workflow is still forthcoming. It must be administered by an Ob/Gyn resident, fellow or attending.
3. The patient will be scheduled for IOL on L&D 24-48 hours after Mifepristone administration. L&D Charge Nurse may need to be notified if the patient needs to be overbooked.
4. On admission, the patient should be counseled on the risks of bleeding, bleeding requiring blood transfusion, infection, retained products of conception requiring surgical management. Written consent for D&C in the event of retained products of conception should be obtained.

5. For IUFD <28w0d, misoprostol should be administered per ACOG PB 135, Second Trimester Abortion (see Addendum item #3). If GA 24-28 weeks with a prior hysterotomy, may counsel patients on IOL with misoprostol dose of 400mcg every 6 hours (24-28 weeks) versus repeat cesarean section (Management of Stillbirth Obstetric Care Consensus).
6. For IUFD >/=28w0d, standard induction of labor policy should be followed. Please see separate UCMC protocol for IOL.
7. No fetal monitoring is indicated. Tocometry may be used based on clinical judgment (I.e previous c-section). Anesthesia will be consulted for pain management in labor.
8. The patient should be counseled on post-delivery care and their wishes should be documented to optimize provider handoff. This may include but is not limited to: umbilical cord clamping; desire to hold the fetus; desire to keep the fetus in the room; desire for hand/footprints or pictures (Bereavement Committee).
9. Delayed placental expulsion: If the placenta does not deliver with the fetus, the umbilical cord should be clamped and cut. In appropriately selected patients, expectant management of the placenta may be considered. Misoprostol or hemabate may be administered to assist in placental delivery.
10. Patients may be discharged on day of delivery if clinically appropriate.

Special Circumstances

Women with a previous hysterotomy and fetal demise after 28 weeks should undergo IOL per standard protocol for TOLAC. If prior classical cesarean or >2 previous cesarean sections, individualize delivery planning. Repeat cesarean section is “reasonable” (Management of Stillbirth Obstetric Care Consensus).

References

Management of stillbirth. ACOG Obstetric Care Consensus No 10. American College of Obstetricians and Gynecologists. Obstet Gynecol 2020; 135:e110-32

Second trimester abortion. Practice Bulletin #135. American College of Obstetricians and Gynecologists. Obstet Gynecol 2013; 121:1394-1406

Allanson ER, Copson S, Spilsbury K, et al. Pretreatment With Mifepristone Compared With Misoprostol Alone for Delivery After Fetal Death Between 14 and 28 Weeks of Gestation: A Randomized Controlled Trial. Obstet Gynecol. 2021;137(5):801-809. doi:10.1097/AOG.0000000000004344.

Addendum

1. IUFD Laboratory Work Up in ALL patients
    a. Fetal autopsy, Placental examination, Fetal karyotype/microarray, Kleihauer Betke (KB), Syphilis screening (Trepia/RPR), Anti phospholipid antibody testing (APLAS), Type and Screen
    b. In SELECT patients, glucose screening (HgbA1c), toxicology screening, coagulation factors (PT/INR, PTT, Fibrinogen)

2. The updated Mifepristone REMS Program **maintains the requirement for prescriber certification and completion of the Prescriber and Patient Agreement Forms**. The revised REMS document and materials are on the FDA website: https://www.accessdata.fda.gov/drugsatfda_docs/rems/Mifepristone_2023_01_03_Patient_Agreement_Form.pdf

3. Medication Regimens for Second-Trimester Management of IUFD

Box 1: Regimens for Second-Trimester Medical Abortion ⇦

- Mifepristone, 200 mg, administered orally, followed in 24–48 hours by
  - — Misoprostol, 800 micrograms, administered vaginally, followed by 400 micrograms administered vaginally or sublingually every 3 hours for up to a maximum of five doses.*
  - — Misoprostol, 400 micrograms, administered buccally every 3 hours for up to a maximum of five doses also may be used.
- If mifepristone is not available:
  - — Misoprostol, 400 micrograms, administered vaginally or sublingually every 3 hours for up to five doses.* Vaginal dosage is superior to sublingual dosage for nulliparous women.
  - — A vaginal loading dose of 600–800 micrograms of misoprostol followed by 400 micrograms administered vaginally or sublingually every 3 hours may be more effective.
- If misoprostol is not available:
  - — Oxytocin, 20–100 units, infused intravenously over 3 hours, followed by 1 hour without oxytocin to allow diuresis. Oxytocin dosage may be slowly increased to a maximum of 300 units over 3 hours.†

*If the abortion is not complete after five doses, the woman may be allowed to rest for 12 hours before starting the cycle again.

†High-dose oxytocin is not commonly used in the second-trimester because of the inefficient response of the uterus to oxytocin during this gestational period.

4. Cytogenetics and Autopsy

    a. <20 weeks EGA (based on dates not measurements)
        i. Does not desire cytogenetics: Surgical pathology order placed in EPIC. Specimen (fetal remains and placenta) goes to surgical pathology with printed EPIC order requisition.
        ii. Does desire cytogenetics: Surgical pathology and Cytogenetic analysis of POC order placed in EPIC. LabCorp form filled out by OB provider and patient. All three forms go with specimen (FRESH) to surgical pathology. Surgical pathology will then take portion of placenta and send to LabCorp.
        iii. If weekend/nights: page Pathology resident on call to let them know sending specimen for cytogenetic sample.

    b. >20 weeks EGA (based on dates not measurements)
        i. Patient desires autopsy:
            - ODA notified, fetal remains and placenta taken to infant morgue cooler.
            - Fetal remains and placenta go to CCHMC for evaluation.
            - If cytogenetics is also desired this is done through LabCorp.
            - Genetics analysis order placed in EPIC. (Printed and accompany fetal remains/placenta)
            - LabCorp requisition completed by provider and patient (accompany fetal remains/placenta)
            - ODA has fetal disposition/authorization completed by family and provider.
            - ODA notifies pathology when mother is discharged.
            - Pathology residents take fetus and placenta to CCHMC for autopsy.
            - Section of placenta is sent to LabCorp for cytogenetics.
            - Occasionally, CCHMC pathologist will decide to do the cytogenetics in-house but most often the LabCorp requisition and process is followed.
        ii. Patient does not desire autopsy:
            - Fetal remains handled by ODA and transferred to morgue.
            - Placenta to surgical pathology with surgical pathology order in EPIC (printed and accompany specimen)
            - If desires cytogenetics: LabCorp form filled out by OB provider and patient and sent with placenta (FRESH), order also placed in EPIC for cytogenetics. All three forms sent with placenta to surg path.
            - Surg path will take portion of placental specimen and send to LabCorp.