

## MANAGEMENT AND PREVENTION OF STILLBIRTH

### BACKGROUND

- incidence approximately 1 in 150 pregnancies
- recurrence approximately 3% (depends on underlying cause)
- parents have 3 questions:
  - Why did this happen?
  - Could it happen again?
  - What do we do now?

### ETIOLOGY

- most frequent causes:
  - (unmonitored) fetal growth restriction
  - post dates (poorly dated pregnancy)
  - fetal aneuploidy (abnormal number of chromosomes)  
(Down syndrome and Turner Syndrome = most common)
  - lethal fetal anomalies/syndromes
  - hypertensive disease (principally due to unexpected abruption)
  - poorly controlled diabetes
  - extreme obesity, especially close to term (pathophysiology unclear)
  - thyroid disease (both hyper- and hypo-)
  - intrahepatic cholestasis of pregnancy
  - lupus erythematosus  
(especially with antiphospholipid syndrome or renal insufficiency)
  - fetal infections  
(cytomegalovirus, parvovirus, syphilis, etc.)
  - feto-maternal hemorrhage (especially after trauma)
- nevertheless, up to a third of stillbirths are idiopathic, despite work up

-cord accidents are actually an uncommon, but commonly ascribed, cause of stillbirths (excluding overt cord prolapse, velamentous insertion, entanglement of monoamniotic twins)

-likewise, the inherited thrombophilias are no longer thought to be a significant cause of stillbirth

#### WORK-UP

-Amniocentesis for fetal karyotyping has the highest yield and is particularly valuable if delivery is not expected imminently. Fluorescence in situ hybridization may be useful if fetal cells cannot be cultured. Likewise, the newer technology, comparative microarray analysis (CMA), is able to detect significantly more fetal aneuploidy and other chromosomal abnormalities compared to traditional karyotyping (where the failure rate is up to 30% due to tissue autolysis in the setting of IUFD).

#### Orders: Prior to delivery

Alanine aminotransferase (ALT) aka SGPT

Alkaline phosphatase

Anticardiolipin antibody\*

Aspartate aminotransferase (AST) aka SGOT

Beta-2-glycoprotein-1 antibody\*

Bile acids

Bilirubin, total

Complete blood count with differential, and platelet count

Creatinine

Drug screen (urine)

Fibrinogen

Glucose

Group B Beta Strep culture (rectovaginal)

Herpes simplex virus culture (cervical)

Kleihauer Betke

Lupus anticoagulant\*

Prothrombin time, partial thromboplastin time

Rapid plasma reagin

Type and screen

Urinalysis, clean catch

\* If testing for APAS is positive by any of these three tests, please repeat testing in 12 weeks to confirm.

#### DELIVERY

-diagnosis confirmed with bedside ultrasound

-parents to decide on timing of induction (risk of coagulopathy minimal unless stillbirth >3 weeks)

-optimal induction agent is misoprostol 50-100 mcg vaginally q4h

-dose of misoprostol may be 200-400 mcg vaginally q4-6h in the second trimester

-30 cc Foley bulb ripening followed by oxytocin is safe in women at term with prior cesarean

-misoprostol (same dose) safe for women in the 2nd trimester (<28 wks) with prior cesarean

-To maximize the yield on the chromosome studies: the most viable tissue generally is the placenta or segment of umbilical cord closest to the placenta, followed by fetal cartilage obtained from the costochondral junction or patella

#### Orders at delivery:

Fetal autopsy (with permit)

Fetal cultures (stomach or oral)

Fetal karyotype (see sampling method above)

Fetal photographs (for patient record)

Fetal weight

Fetal X-ray, total body

Placenta for histology /pathology (after karyotype obtained)

## AFTERCARE

- encouraging parents to see and hold the infant helps with the grieving process
- (See Appendix 1: The Five Protections)
- photos or mementos may be appropriate if parents desire
- chaplaincy services appropriate if parents desire
- social service consult appropriate to help parents make funeral arrangements
- approach parents about autopsy (provides the most useful information about etiology)
- advise about managing engorged breasts
- if mother is from the Anchorage bowl area, contact the OB/GYN SCF Behavioral Health Specialist for outpatient follow-up in one week
- arrange follow up with provider in 6 weeks to review lab work up and autopsy reports
- advise about future pregnancies as able, depending on etiology (if able to be determined)
- discuss contraception; usually best to avoid immediate sterilization, even if planned
- avoid “sedative” medications; offering counseling more appropriate

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## Resolve Through Sharing

### Take home points for healthcare providers: Principles of care

- Parents who choose perinatal palliative care wish to parent their baby for as long as the baby lives. These parenting moments will bring them great joy, as well as a great sorrow. Engage with them in such a way that you can share these complex and varying emotions.
- Being obviously pregnant is seen in western culture as an invitation to ask personal and sometimes intimate questions. Help parents prepare for the inevitable excited queries, “When are you due? Is it a boy or a girl? Is it your first?”
- If the baby is born alive, provide care in the hospital (nursery or NICU) or at home that focuses on how the parents want the experience to be for them, their family, friends, and their baby. This includes the opportunity to be with their baby after death. Be mindful of opportunities for ritual and keepsake activities.
- Plan in advance for hospice or home care. If the baby goes home, make sure that the parents know how to reach a knowledgeable healthcare provider round the clock. Ensure that all of the appropriate documents (discharge summary, medication prescriptions, phone number list) accompany the baby and family.
- Include all those who need to know about the impending death (emergency medical providers, coroner, police, and funeral director) in the plan.
- Ask, “What symptoms are most concerning to you right now?” and be prepared to treat each one. Or ask, “What are your greatest concerns right now?”
- Provide written information using several different scenarios to describe what dying may be like. Think of all the senses.
- Provide guidance and resources on how to talk to other children about what is happening: the death, what to expect, the funeral; and how to create support for other children at school. Develop avenues or processes for communication between all participants to ensure the seamless provision of care for the baby and parents from the prenatal period through bereavement.
- Multiple situations over time call for parental decision. Ensure a process for supporting parents in the hospital and at home.
- Establish relationships with community agents who may be involved in the baby’s care in the home environment.

## Appendix 1: THE FIVE PROTECTIONS

**DISBELIEF** - Ignoring/Not Knowing/Not Remembering/Not Accepting/Not Trusting

**HIDING EMOTIONS** -

**DESIRE** - Wanting something to avoid having an uncomfortable feeling or emotion.  
(or getting caught in the **Desire-numbing substance-guilt/shame cycle**)

**Asking the “WHY” question and answering...**

“It’s your fault.” - Blaming others, using **ANGER**

“It’s my fault.” - Blaming yourself, using **GUILT-SHAME**

**EFFORT** - To **avoid** something or to **prove** something

**FRAGMENTATION/DISSOCIATION** -Feeling distracted, unable to concentrate, always wanting to be somewhere other than where you are, “spacing out”.

**REFUSAL/REBELLION/REVERSAL** - Overly quick to be defensive/ Getting in your own way/Tending to do the opposite of what authority figures say/Refusing to give up, etc.

LIST THE PROTECTIONS YOU CIRCLED AND ADD **HOW YOU KNOW** THAT YOU HAVE USED AND/OR CURRENTLY USE THAT PROTECTION:

- 1.
- 2.
- 3.
- 4.
- 5.

If you are currently using a protection, think about what you might be protecting yourself from. Is the protection related to a stressor from the past or is it from a stressor currently in your life?