

THIRD & FOURTH STAGE OF LABOR

FLAME LECTURE 66

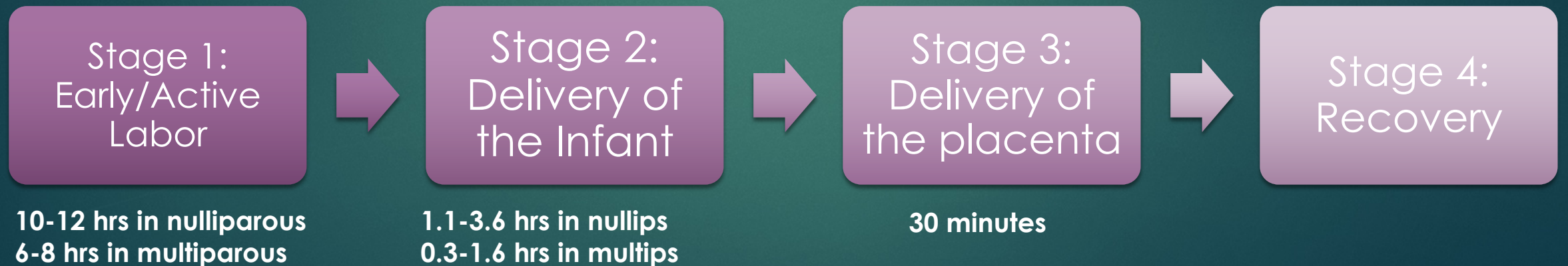
MCDANIEL 9.1.23

LEARNING OBJECTIVES

- ▶ Understand the physiological mechanisms behind placental separation
- ▶ Describe the physician's role in the delivery of the placenta
- ▶ Be able to discuss methods used in the management of retained placenta
- ▶ Understand the most common types of laceration sustained during delivery and approaches to repair
- ▶ Prerequisites: None
- ▶ See also
 - ▶ FLAME 61: RULING OUT LABOR
 - ▶ FLAME 63: EARLY & ACTIVE LABOR
 - ▶ FLAME 65: SECOND STAGE OF LABOR

OVERVIEW OF NORMAL LABOR

- ▶ Definition of labor:
 - ▶ Contractions that cause cervical change in either EFFACEMENT or DILATION
 - ▶ Occurs between 37-42 weeks (<37 weeks is preterm labor)
- ▶ Labor is assessed by the progress of:
 - ▶ Cervical effacement: i.e., how the cervix is thinning out (from 0-100%)
 - ▶ Cervical dilation: i.e., how the cervix is opening (from 0-10 cm dilated)
 - ▶ Descent of fetal presenting part (-5 to +5 station)
 - ▶ Four stages of progression:



Navigate:

[Duration](#)

[Monitoring](#)

[Position](#)

[Delivery](#)

[Special Techniques](#)

STAGE 3: PLACENTAL SEPARATION

- ▶ Following delivery of the fetus, myometrial thickening leads to significant reduction in the uterine surface area
 - This results in shearing forces that lead to placental separation
 - Process begins at lower pole and progresses along adjacent sites
- ▶ There is no universally accepted criterion for normal length of the 3rd stage of labor
 - Usually occurs within 5-10 minutes
 - Up to 30 minutes is considered normal
 - Preterm deliveries are associated with a longer third stage than term deliveries
- ▶ Three signs of separation:
 1. Cord lengthening
 2. Gush of blood
 3. Anterior-cephalad movement of the uterine fundus also known as “uterine rebound”- Placenta should not be delivered until these signs are noted

STAGE 3: PLACENTAL EXPULSION

- ▶ Expulsion eventually results from:
 1. Spontaneous uterine contractions
 2. Downward pressure from developing retroplacental hematoma
 3. Increase in maternal abdominal pressure
- ▶ Active management of placental delivery reduces the risk of severe blood loss. It generally consists of:
 1. Gentle downward traction on umbilical cord to facilitate separation
 - Excess traction can result in cord avulsion or uterine inversion
 2. Constant suprapubic pressure to prevent uterine inversion or prolapse
 3. Controlled delivery at the introitus to prevent additional perineal trauma and tearing of membranes
 4. Examination of the placenta, umbilical cord, and fetal membranes

STAGE 3: RETAINED PLACENTA

- ▶ Diagnosis of retained placenta is made when it is not expelled 30 minutes after the delivery of the infant
- ▶ Retained placenta is more common in cases of:
 - Preterm deliveries, especially early second trimester losses
 - [Placenta accreta spectrum](#)
- ▶ Retained placenta may be first removed by [manual extraction](#):
 1. Place hand in intrauterine cavity to the fundus
 2. Use fingers to create a plane between placenta and endometrium
- ▶ If placenta cannot be removed manually, [curettage](#) is performed to ensure that there are no retained products of conception
 - ▶ A gritty texture felt with the instrument on the uterine wall helps confirm that the retained placenta and membranes have been successfully removed

STAGE 3: OXYTOCIN USE

- If practitioners are certain that another fetus is not present, oxytocin should be initiated following delivery to strengthen uterine contractions
 - Some practitioners will start it immediately at the completion of stage 2 if they are confident they can remove the placenta successfully, some immediately after stage 3
 - Leads to decreased time to delivery
 - Reduces blood loss
 - If continued bleeding a second bag of Pitocin may be run

STAGE 4: UTERINE RECOVERY

- ▶ Last stage of labor, the 1-2 hours following delivery
- ▶ Uterine tone increases and fundus shrinks down towards umbilicus
 - ▶ Contractions can be enhanced with oxytocin or initiation of breastfeeding to hasten uterine recovery
- ▶ Lacerations are typically repaired after the placenta is delivered during 4th stage
- ▶ Mother is also monitored for difficulty urinating and post-partum hemorrhage before being transferred to post-partum room

STAGE 4: LACERATION REPAIR

- ▶ A thorough examination of the following regions should be performed for laceration:

Perineum	Labia	Periurethral
Vagina	Anus	Cervix

- ▶ The most common type of lacerations are **perineal lacerations**, which are described by the **depth** of tissue that they involve:

Type	Location
First degree	Mucosa or skin
Second degree	Extend into perineal body (PB)
Third degree	Extend through the PB and into the anal sphincter
Fourth degree	Extend into anal mucosa

- ▶ Major risk factors for 3rd and 4th degree lacerations are nulliparity, operative vaginal delivery, midline episiotomy, and macrosomia/shoulder dystocia

REFERENCES

- ▶ Callahan, Tamara L. and Caughey, Aaron B.. *Blueprints Obstetrics & Gynecology*. Philadelphia: Wolters Kluwer Health/Lippincott William & Wilkins, 2009. Print.
- ▶ Funai, Edmund F., and Errol R. Norwitz. "Management of Normal Labor and Delivery." *Management of Normal Labor and Delivery*. UpToDate, 17 Sept. 2015. Web. 16 Feb. 2016.
- ▶ Toy, Eugene C. *Case Files: Obstetrics and Gynecology*. New York: McGraw-Hill, 2013. Print.