Prevention of Neonatal Sepsis Due to Group B Streptococci (GBS)

- Perform antepartum GBS-specific cultures between 35 and 37 weeks' gestation according to the methodology specified by the CDC.
  - For women with positive screening cultures during a previous pregnancy, re-culture during subsequent pregnancies and manage on the basis of the current culture.
  - For women who have had a negative GBS culture performed prior to 35 weeks (whether positive or negative), perform repeat screening culture between 35 and 37 weeks gestation if it is anticipated that delivery may occur > 5 weeks after the prior culture.
- If the results of cultures are not available, administer intrapartum antibiotics to all women who have any of the following risk factors:
  - Preterm labor (< 37 weeks gestation)
  - Rupture of membranes > 18 hours
  - Intrapartum temperature ≥ 100.4°F orally or 100°F axillary
- Administer intrapartum antibiotics to women with either of the following (regardless of culture results):
  - Previous GBS infected neonate
  - GBS bacteriuria (of any magnitude of colony count) at any time during the current pregnancy.
  - If non-PCN or Cephalosporin based treatment is contemplated, based on allergy history, order reflex sensitivities.
- Penicillin is the first line antibiotic recommended for this purpose; ampicillin is also acceptable.
- If non-penicillin/cephalosporin options are contemplated due to allergies, reflex sensitivity to both clindamycin/erythromycin should be performed.
- For penicillin-allergic individuals, acceptable antibiotics include:
  - Cefazolin
    - Preferred alternative except for patients at high risk for anaphylaxis.
  - Clindamycin or Erythromycin
    - For patients at high risk for anaphylaxis to penicillin and whose GBS is known to be susceptible to both agents.
  - Vancomycin
    - For patients at high risk for anaphylaxis to penicillin, and whose GBS is resistant to either erythromycin/clindamycin or susceptibility is unknown.

Use of Antenatal Corticosteroids for Fetal Maturation

- Administer corticosteroids to all women between 24 and 34 weeks' gestation who are considered to be at significant risk for delivery within seven days. This includes women with rupture of membranes, unless individual circumstances affect this decision.
  - Corticosteroids may be offered before 24 weeks on a case by case basis.
- Treatment options include:
  - Betamethasone 12mg IM q24hrs x 2 doses, or
  - Dexamethasone 6mg IM Q12hrs x 4 doses.
- A single rescue course of antenatal corticosteroids may be considered if the antecedent treatment was given > 2 weeks prior, the gestational age is ≤ 32 6/7 weeks, and the woman is judged by the clinician to be likely to give birth within the next week.
  - Benefits for women with preterm premature rupture of membranes (PPROM) remain uncertain.
  - Regularly scheduled repeat courses or multiple courses (> 2) are not recommended.
- Late Preterm Gestational Age (34-36 6/7wks)
  - One course of corticosteroids (i.e. betamethasone 12mg x 2 doses) may be considered pregnancy at high risk for late preterm delivery (i.e. preterm labor with cervical dilation >3cm and effacement of at least 75%, PPROM, severe preeclampsia) and this should be discussed with the patient.
  - Administration of steroids should not delay delivery.
  - Exclusions due to lack of data include: previous steroid administration earlier in pregnancy, diabetes, anticipated delivery within 12 hours, multiple gestation.

Scheduled Elective Delivery

- Elective delivery of singleton gestations should not be planned to occur before seven days prior to the Estimated Due Date (EDD), prior to 39 weeks gestation without clear medical/obstetrical indications
  - See Joint Commission statement
- See Women and Infant Policy
  - Scheduling of Cesarean Sections and Inductions
Elective (Patient Choice) Cesarean Section

- Elective cesarean section is defined as a primary cesarean performed at patient request without medical indication.
- Each physician may decide to support the patient request or not, on a case-by-case basis.
- Primary cesarean section on maternal request without medical indication should not be scheduled earlier than seven days prior to the EDD.
- If a physician agrees to perform a primary cesarean section upon patient request, then detailed written informed consent should be obtained.

Induction and Augmentation of Labor

- Use standard policies and procedures for scheduling elective induction of labor, ensuring documentation of gestational age, and the indication and method for induction of labor.

Prior to induction or augmentation of labor

The following criteria should apply:
- No contraindications to augmentation of labor.
- The fetal presentation is cephalic.
- No evidence of potential fetal acidemia or hypoxemia, such as the presence of a Category III FHR tracing.

Methods of Induction

- Amniotomy
- Oxytocin (e.g., Pitocin®)
  - If oxytocin infusion rates rise > 20 mu/min, documentation of clinical reasoning is required and intrauterine pressure catheter (IUPC) may be considered.
- Synthetic Prostaglandin E1 or E2 (e.g., Misoprostol/Cytotec®; or Dinoprostone/Cervidil®, Prepil® or Prostin E2®).
- Mechanical methods of cervical ripening; if the status of the cervix is unfavorable, mechanical cervical dilators such as an intracervical foley balloon may be used.
- Labor may be augmented with the use of oxytocin, amniotomy, or both.
  - See Induction - Augmentation with Oxytocin® policy.

Previous Cesarean Section / Vaginal Birth after Cesarean (VBAC)

Counseling

- Discuss with eligible patients the risks and benefits of a trial of labor after cesarean versus an elective repeat cesarean section. This discussion should occur after all past obstetrical history is obtained and should ideally occur early in the pregnancy.

- Further discussion during the third trimester may be required according to changes in clinical condition (e.g., fetal size, presentation, need for induction, etc.). Issues that may be important in this decision include:
  - Success rates of a trial of labor.
  - Risks of perinatal morbidity and mortality.
  - Risks for maternal infection, operative injury, hysterectomy, transfusion.
  - Uterine rupture risk.
  - Recovery and hospital stay.
  - Future childbearing/planned family size.

Contraindications to a Trial of Labor after Cesarean

- Prior cesarean section involving the upper contractile portion of the uterus (classical uterine incision).
- Prior T incisions on the uterus.
- Prior uterine surgery involving the upper contractile portion of the uterus with significant disruption of the uterine wall or entering of the uterine cavity.
- Prior uterine rupture or dehiscence.
- Contracted pelvis
- Other contraindication to vaginal delivery.

Trial of Labor after Cesarean Section

- A physician who has credentials to perform an emergent cesarean section should be immediately available throughout active labor.
- Anesthesia and nursing/operating room personnel should be available for emergent performance of a cesarean section.
- Continuous electronic fetal monitoring should be instituted no later than the institution of the use of epidural or oxytocin. According to ACOG, most authorities recommend continuous electronic monitoring during labor.
- Intravenous access should be obtained in all patients with a prior cesarean section.
- Oxytocin may be used for augmentation of labor in the absence of disproportion.
- Oxytocin may be used for induction after a discussion with the patient of the potential increased risk of uterine rupture associated with its use.
- Prostaglandins (including Misoprostol) are not recommended for cervical ripening or the induction of labor after a prior cesarean section.

Postpartum Depression Evaluation

- Based on OB H&P evaluation, assess for and counsel on, postpartum depression.
- Refer to Social Work or Psychiatry as needed.
- Consider an early (1–3 week postpartum) visit for women at risk for postpartum depression:
  - Past episodes of depression
  - Family history of mood disorder
  - Concurrent stressful life events.
Use of Episiotomy

- Episiotomy is used to increase the diameter of the maternal soft tissue pelvic outlet in an attempt to prevent perineal lacerations and facilitate delivery.
- Systematic reviews have shown no benefit to routine elective use of episiotomy. Routine elective episiotomy should not be practiced.
- Currently, restricted use of episiotomy is considered acceptable.
- Indications for episiotomy include:
  - Expediting a vaginal delivery for fetal well-being.
  - Assisted second stage of delivery with vacuum or forceps.
  - Assistance for delivery complicated by shoulder dystocia.
  - Concerns for shortened perineal body and risk for third/fourth degree laceration.
- Adverse effects of episiotomy may include:
  - Extension into the anal sphincter (median type)
  - Increased blood loss and pain
  - Sexual dysfunction
  - Unsatisfactory cosmetic result.
- There are two techniques to episiotomy:
  - Median incision
  - Mediolateral episiotomy incision
- There are inadequate data on which to base a recommendation for preferred episiotomy type.
  - Selective use of mediolateral episiotomy may result in a lower rate of third- and fourth-degree lacerations, but may result in an increased risk for increased pain and dyspareunia when compared to a median episiotomy.
  - Clinicians should weigh these risks when choosing their method of episiotomy.

OSUWMC Resources

Ordersets
- OSU IP OB: Admission Cesarean Delivery (3117)
- OSU IP OB: Post Cesarean Delivery (2082)
- OSU IP OB: Admission to Labor & Delivery / Vaginal Delivery (3104)
- OSU IP OB: Post Vaginal Delivery (2078)
- OSU IP OB: Triage-Early Labor (2463)
- OSU IP OB: Admission Glucoregulation Antepartum (2072)
- OSU IP OB: Admission Antepartum (3119)

Policies
- Admission Policy to Labor and Delivery/Assessment Center
- Induction: Two-Stage, Viable Pregnancy
- Scheduling of Cesarean Sections and Inductions
- Vaginal Birth After Cesarean (VBAC)
- Corticosteroid, Relative Systemic Potencies

Guidelines
- Postpartum Hemorrhage
- Diabetes: In Pregnancy - Inpatient Management

Quality Measures
- Elective deliveries prior to 39 weeks gestation without indication
- Vaginal birth after cesarean section rate
- Cesarean section rate
- Cesarean section deliveries for low-risk first birth women
- Appropriate use of antenatal steroids
- Not-indicated episiotomy rate

References
- ACOG Committee Opinion, “Antenatal Corticosteroid Therapy for Fetal Maturation”, Number 677, October 2016

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Disclaimer: Clinical practice guidelines and algorithms at The Ohio State University Wexner Medical Center (OSUWMC) are standards that are intended to provide general guidance to clinicians. Patient choice and clinician judgment must remain central to the selection of diagnostic tests and therapy. OSUWMC’s guidelines and algorithms are reviewed periodically for consistency with new evidence; however, new developments may not be represented.

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