Management of Obesity in Pregnancy

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Funding for this project is provided in part by The Duke Endowment

Learning Objectives

1. Understand the increased risks of varying medical and obstetrical conditions in the obese population
2. Develop a management plan for obese patients both before and during pregnancy
3. Understand the risks of prior bariatric surgery on pregnant patients

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Background

- Obesity is the most common health issue among women of childbearing age, affecting 1/3 of all women
  - 7.5% of women have a BMI>40

- The Pregnancy Medical Home Care Pathway on Management of Obesity in Pregnancy describes best practice management of three groups:
  - Women with BMI 30-40
  - Women with BMI >40
  - Women with a history of bariatric surgery

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Preconception Care

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- Two priorities prior to conception:
  - Identification and management of comorbid conditions
    - Screen for metabolic syndrome/other conditions
      - Hypertension screening
      - HgbA1c for diabetes
      - Metabolic panel
      - TSH
      - Urine protein/creatinine ratio
      - Consider EKG in patients with BMI >40 and in those with BMI >30 with other comorbidities

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Preconception Care

- Two priorities prior to conception:
  - Aggressive weight loss management
    - Nutritional consultation
    - Exercise
    - Referral for bariatric surgery
      - BMI > 35 with 2 or more comorbid conditions
      - BMI > 40
  - Folic acid supplementation:
    - 1mg daily
    - Consider 4mg daily if other factors are present

Prenatal Care – 1st Trimester

- Screen for comorbidities:
  - Hypertension screening
  - HgbA1c and early GTT for diabetes
  - Metabolic panel
  - TSH
  - Urine protein/creatinine ratio
  - Consider EKG in patients with BMI >40 and in those with BMI >30 with other comorbidities
- Nutritional consultation
  - IOM weight gain recommendation: 11-20 pounds
  - Folic acid supplementation

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Prenatal Care – 1st Trimester

- Discuss perinatal risks:
  - Fetal anomalies (higher risk, less likelihood of detection)
  - Gestational diabetes
  - Preeclampsia
  - Macrosomia
  - Cesarean delivery/wound complications
  - Stillbirth
- Ultrasound for accurate dating

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Prenatal Care – 1st Trimester

- Suspected sleep apnea
  - Snoring, excessive daytime sleepiness, witnessed apneas, or unexplained hypoxia
  - Refer to sleep specialist
- Low dose aspirin
  - 81mg daily for BMI >40 or BMI >30 with additional risk factor
  - Initiate at 12-16 weeks
  - Can initiate up to 28 wks
- Consider referral to high-risk OB or maternal-fetal medicine for continued care for BMI > 50 or per institutional protocol

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Prenatal Care – 2nd Trimester

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- Monitor weight gain
  - 50% with weight gain greater than recommendation
- Detailed anatomy ultrasound – address limitations with patient
  - 20-30% reduction in anomaly detection
- Consider OB anesthesia consult for BMI > 50 or per institutional protocol

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Prenatal Care – 3rd Trimester

- Repeat gestational diabetes screening
- Consider serial growth ultrasound if pannus precludes accurate fundal height assessment
- Consider weekly NST/AFI after 36 weeks
- Consider referral to high-risk OB or maternal-fetal medicine for delivery planning for BMI > 50 or per institutional protocol

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Delivery

- Induction/Delivery per institutional protocol
  - Fetal monitoring
  - Early OB Anesthesia consult
  - Patient transportation
  - OR preparation
  - Shoulder dystocia/PPH
  - Consider SCDs for patients with induction and prolonged bed rest

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Delivery

- Primary cesarean - in patients with BMI > 60, there are instances where inability to perform emergent cesarean may preclude attempt at vaginal delivery
- Cesarean delivery:
  - 3g cefazolin with delivery
  - Hibiclens shower/wipe prior to cesarean
  - Operative prep per local protocol
  - SCDs for all cesarean patients
  - Consider negative pressure wound dressing in high-risk patients (BMI > 40, chorioamnionitis in labor, prolonged labor)

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Post Delivery

- Cesarean delivery:
  - OT/PT consult post-delivery if difficulties with wound care or ADLs are anticipated
- Lactation consult
- Consider low molecular weight heparin in highest-risk patients (BMI> 50, chorioamnionitis in labor, prolonged labor, preeclampsia)
  - Initiate at 12-24 hours post-delivery
  - BMI 40-60 – 40mg twice daily
  - BMI > 60 – 60mg twice daily

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Postpartum Care

- Provide comprehensive postpartum care as per guidance in the PMH Care Pathway on Postpartum Care and the Transition to Well Woman Care
- Incisional check at 5-7 days
  - Remove external wound vacuum, if utilized
- Review contraceptive options
  - IUD or implant are preferred methods
- Nutritional counseling
- Encourage breastfeeding

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Postpartum Care

- Ensure transition to primary care provider
- Consider bariatric surgery referral:
  - BMI > 40
  - BMI > 35 with 2 or more comorbid conditions

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Prior bariatric surgery

- Most patients remain obese following bariatric surgery – follow guidelines for management of obesity in pregnancy
- Three primary bariatric approaches:
  - Gastric lap band (restrictive)
  - Vertical sleeve gastrectomy (restrictive)
  - Roux-en Y (restrictive and malabsorptive)
- Review risks/benefits of pregnancy after bariatric surgery (see Appendix A)
  - No difference in pregnancy outcomes with restrictive vs. malabsorptive
  - Recommend delaying pregnancy 18-24 months after surgery

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Prior bariatric surgery – 1st trimester

- Maternal-fetal medicine or high-risk OB consult; consider transfer of care
- Consider proton pump inhibitor
- Consider low-dose aspirin
- Review nutritional considerations (see Appendix A)
- Labs – CBC, ferritin, iron, vitamin B12, RBC folate (not serum folate), vitamin D, calcium, drug levels if therapeutic drug level is critical (absorption of oral meds may be decreased)

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Prior bariatric surgery – 2nd trimester

- Diabetes screening – 50% cannot tolerate oral glucose tolerance test due to dumping syndrome
  - If able to drink a 12-ounce soda, likely able to tolerate GTT
  - Consider GTT alternatives (see Appendix A)
- Labs – CBC, iron, ferritin, calcium, vitamin D, drug levels as needed, diabetes screen at 24 – 28 weeks

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Prior bariatric surgery – 3rd trimester

- Many women may require labor induction/ augmentation and have longer labor as most post-bariatric patients remain obese
- Prior bariatric surgery is not an indication for cesarean delivery
- Consider pre-labor consultation with bariatric surgeon if extensive abdominal surgery

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Prior bariatric surgery – postpartum

- Use caution with NSAIDs to avoid gastric ulceration
- Contraceptive counseling
- Recommend lactation consultation if breastfeeding
- If breastfeeding encourage
  - calcium citrate supplementation 1500 mg
  - vitamin D 400-800 IU
  - vitamin B12 500-1500mg daily

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Questions?

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