OBJECTIVES

We sought to evaluate the wound disruption rate in women with class III obesity undergoing caesarean deliver (CD) and identify underlying risk factors.

STUDY DESIGN

Women with class III obesity (body mass index (BMI) ≥40 kg/m²) who were following in a specialized clinic for pregnancy and obesity who underwent CD > 24 weeks-gestation at Mount Sinai Hospital between 2011-2015 were included in the analysis.

Data demographics (age, parity, and education), clinical history (BMI, comorbidities, smoking status, prior wound infection) were collected. Information regarding the cesarean delivery were collected including primary or repeat, elective or emergent, length of procedure and timing of the day.

Information regarding opening and closure of the skin was collected including entry and closure methods, and type of dressing. The primary outcome was wound disruption.

We specifically evaluated 5 variables that we thought to be important to our final analysis.

1. BMI
2. Emergent vs elective C-section
3. Skin incision type (Pfannenstiel, infraumbilical, midline vertical)
4. Closure of subcutaneous layer
5. Closure of skin (surgical time and DVT prophylaxis)

A multi-variables logistic regression analysis was done to adjust for any confounding factors.

RESULTS

- 63% of patients had skin closures with staples, while 32.5% had subcuticular closures.
- One-third of patients had multiple comorbidities such as diabetes, hypertensive disease of pregnancy and asthma.
- The mean age was 32.83 ± 5.19 and mean BMI of 48.49 ± 7.85 were analyzed.
- Trends towards higher probability of wound complication were seen among women with BMIs ≥50 compared to those with BMI <50 (22.2% vs 14.3%; p=0.080).
- C-Section surgical time <1 hour compared to ≥ 1hr (13.8% vs 21.8%; p=0.074).
- Women who received DVT prophylaxis compared to those who did not (20.7% vs 11.9%; p=0.059).

CONCLUSIONS

Wound disruption is common among women with class III obesity undergoing cesarean delivery, but lower in our cohort as compared to other published studies. Risk factors such as a BMI > 50, longer surgical time, and use of DVT prophylaxis require further study to understand their role in morbidity related to these deliveries.