

VBAC in the obese gravida: Reassuring data in a high risk group

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Abstract

Objective: Obesity has been shown to lower vaginal birth after cesarean section (VBAC) success rates. Repeat cesarean delivery (CD) and failed trial of labor after cesarean (TOLAC) both increase risk to the obese gravida. Our objective was to examine the delivery outcomes of obese patients undergoing TOLAC.

Study Design: This was a retrospective cohort of women who attempted TOLAC at an urban, academic hospital between 1/1/2015 and 12/31/2016. Exclusion criteria were EGA < 24 weeks, fetal chromosomal anomalies, IUFD and contraindication for vaginal delivery. Patients were identified by departmental statistics and medical records were reviewed. The VBAC rate for obese women was compared to that of nonobese women, based on BMI at delivery.

Results: 191 women met inclusion criteria. 131 (68.6%) of patients were obese. Mean BMI for the cohort was 32.8 with a range of 19.4-67 kg/m². Hypertension was higher in the obese group (16% vs 5%, p=0.04). Age, parity, and initial cervical dilation were similar in the two groups. In the nonobese group, 82% had a successful VBAC, compared with 74% in the obese group (p = 0.28). In the obese group, 37% were admitted for induction of labor (IOL), similar to the nonobese group (32%, p=0.62). 83 (63%) of the obese group had no previous SVD or VBAC. The CD rate for this subset was 36%. 5-minute Apgar <7, postpartum fever, endometritis and chorioamnionitis rates were similar. Rates of VBAC in patients with class 1 and 2 obesity did not differ from the nonobese group. 55% of patients with class 3 obesity delivered by VBAC, lower than the nonobese group. 4 patients had an admission weight >300 lbs, and all underwent repeat CD.

Conclusion: Obese patients in this cohort had a high rate of successful VBAC, similar to the nonobese group. Obesity should not be a contraindication to TOLAC, even when there is no history of a prior SVD or VBAC. It may be reasonable to set maternal weight >300 lb as a "cut-off" for attempting TOLAC given that all patients delivered by CD, but given the small number of patients above this weight, this warrants further study.

Introduction

- Obesity has been associated with a decreased chance of VBAC success, so providers are often hesitant to offer a trial of labor to this group.
- Vaginal birth after cesarean delivery (VBAC) is associated with decreased maternal morbidity, including lower rates of hemorrhage, thromboembolism, infection and a shorter recovery period compared to a repeat cesarean delivery.
- Given the short- and long-term benefits of VBAC, further exploration about the chance of successful VBAC in this high risk group can be useful for counseling and intrapartum management.

Objective

- To examine the delivery outcomes of obese patients undergoing TOLAC.

Study Design

- This is a retrospective cohort of women who attempted TOLAC at University Hospital, Newark, NJ from 1/1/2015 to 12/31/2016.
- Exclusion criteria: EGA < 24 weeks, fetal chromosomal anomalies, IUFD, contraindication for vaginal delivery, prior CD >2
- Patients were grouped by BMI at time of admission for delivery.
- Obesity was defined as BMI \geq 30 kg/m². Infection was defined as chorioamnionitis or endometritis.
- Success rate was calculated using the MFMU calculator and information available at time of admission.
- Number of patients who had a successful VBAC in the obese group was compared to that of nonobese women
- Fisher's exact test was used

Results: Demographics

	Obese (n=131)	Non-obese (n=60)
Age (years)	29.8 \pm 5	29.3 \pm 6
BMI (kg/m ²)*	35 \pm 5	26.5 \pm 2.4
Parity	1.8 \pm 1.4	2 \pm 1.5
Race/Ethnicity		
African American	57 (43%)	25 (42%)
Hispanic	67 (51%)	28 (48%)
Other	7 (5%)	7 (12%)
Initial cervical dilation (cm)	3.3 \pm 2.2	3.8 \pm 2.4
Gestational age (weeks)	38.6 \pm 2.3	38.1 \pm 3
Hypertension (%)*	21 (16%)	3 (5%)
Prior SVD (%)	26 (20%)	19 (31%)
Prior VBAC (%)	30 (23%)	19 (31%)
Calculated VBAC Success Rate >50% (%)*	70 (53%)	51 (84%)
Induction of labor (%)	48 (37%)	20 (32%)

*p <0.05

Results: Delivery mode

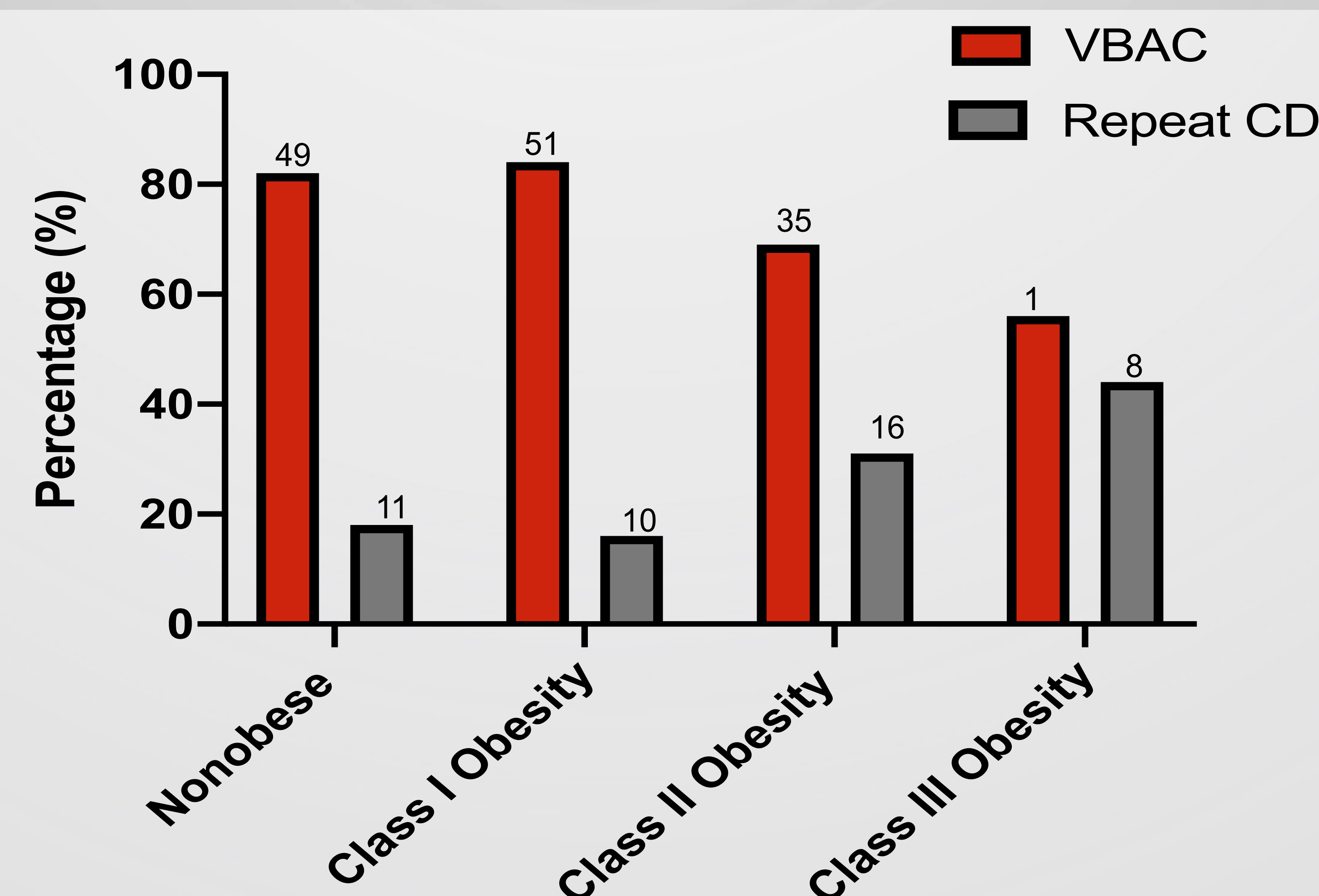


Figure 1: In the non-obese group 82% delivered by VBAC, compared with 74% in the obese group (p=0.28). Four patients had an admission weight >300 lbs, and all underwent repeat CD.

Outcomes

	Obese (n=131)	Non-obese (n=60)
Infection (%)	13 (9%)	3 (5%)
VBAC	6/97 (6%)	1(2%)
RCD*	7/34 (21%)	2(3%)
1-minute Apgar <7 (%)	10 (5%)	8 (13%)
5-minute Apgar <7 (%)	4 (3%)	2 (3%)
Birthweight >4000g (%)	14 (11%)	1 (2%)
Length of stay > 2 nights (%)	27 (20%)	8 (13%)

Table 2: Maternal and neonatal outcomes in obese patients compared to non-obese patients. Obese women who underwent repeat CD after attempting TOLAC had the highest infection rate of the cohort.

Conclusions

- Obese patients in this cohort had a high rate of successful VBAC, similar to the nonobese group.
- Specifically for patients with class 1 and 2 obesity, VBAC success was similar to the nonobese group. Although the chance of VBAC success was lower in the class 3 obese group, the small sample size limits ability to draw conclusions.
- Obesity should not be a contraindication to TOLAC.

References

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