

Induction of labor versus scheduled cesarean delivery in morbidly obese women: a cost-effectiveness analysis

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Objective:

Assess costs, complication rates, and harm-benefit tradeoffs of induction of labor (IOL) compared to scheduled cesarean delivery (CD) in morbidly obese women.

Methods:

We conducted a cost analysis of IOL versus scheduled CD in nulliparous morbidly obese patients using institutional data and data from the literature. Primary outcomes included surgical site infection (SSI), chorioamnionitis, venous thromboembolism (VTE), blood transfusion, and readmission. Model outcomes were mean cost of each strategy, cost per complication avoided, and complication tradeoffs. One-way and Monte Carlo probabilistic sensitivity analyses were performed.

Results:

110 patients with BMI>40 underwent scheduled CD and 114 underwent induction of labor, of whom 61 (53%) delivered via CD. The SSI rate was 0% in the vaginal delivery cohort, 13% following scheduled CD, and 16% following IOL then CD. In the decision model, the mean cost of IOL was \$13,349 compared to \$14,575 for scheduled cesarean delivery. Scheduled CD cost \$9,699 per case of chorioamnionitis avoided. Scheduled CD resulted in 18 cases of chorioamnionitis avoided per additional SSI and 3 cases of chorioamnionitis avoided per additional hospital readmission.

Conclusion(s):

In sensitivity analysis, induction of labor is cost saving compared to scheduled CD unless the CD rate following IOL exceeds 70%.

Figure 1: Sensitivity analysis comparing mean costs of IOL and scheduled CD. Induction of labor costs less than scheduled CD unless the expected cesarean delivery rate after IOL exceeds 70%.

