Protein Drink Supplementation to Promote Parturient Satisfaction During Labor

Introduction: Women in labor who receive Labor Epidural Analgesia (LEA) are restricted to ice chips to prevent aspiration. Emesis and nausea are leading causes of parturient dissatisfaction. Many European countries have liberalized their NPO policies during labor. The purpose of this study is to determine if high protein intake in labor promotes overall patient satisfaction and reduces incidence of nausea and emesis.

Methods: Parturients were randomized into one of two groups - Group C (Ice chips) and Group P (Protein shake and ice chips) following placement of LEA. The drink contains 30 grams of protein in 11 ounces. Inclusion criteria were LEA, cervical dilatation ≤ 5cms, > 36 weeks gestation with singleton pregnancy, vertex presentation and NPO ≥ 4 hours. Exclusion criteria included diabetes, multiple gestation, fetal malpresentation, chronic opioid use, history of gastric bypass surgery, morbid obesity and history of obstetric complication. All patients received PCEA using bupivacaine 0.08% with fentanyl 2mcg/ml. Measured variables included episodes of nausea and emesis collected at hourly intervals until delivery. After delivery, parturients were asked to rate their overall satisfaction (0-100).

Results: Out of the 67 women, 28 belonged to group P and 39 to group C. Both groups were comparable in demographics, pre-epidural insertion NPO times and labor duration (Table). 2 women in group P and 5 in group C required a cesarean section. Episodes of nausea were reported by 21.43% women in group P and 33.33% women in group C (p = 0.43). 10.71% women in group P had emesis vs. 12.82% in group C (p = 0.91). Mean satisfaction score was 92.31 ± 19.03 (median of 100) for Group P and 90.57 ± 11.62 (median 95) for Group C (p = 0.05). None of the patients required a general anesthetic and no patient aspirated.

Discussion: Strict NPO policies are imposed during labor to reduce maternal morbidity and mortality, which may cause apprehension for some women. The widespread use of regional anesthesia and improved general anesthetic techniques has significantly decreased the incidence of maternal aspiration (7 in 10 million births). A more liberal NPO policy such as that used in Europe may be indicated.

Conclusion: Patient satisfaction is markedly improved with protein drink supplementation with no increase in complications (i.e. aspiration, failed intubation). The study remains ongoing to determine if the protein drink decrease the incidences of nausea and emesis.