

Preoperative Oral Carbohydrate Loading Reduces Catabolism in Elective Caesarean Delivery

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Prolonged fasting prior to elective caesarean delivery is associated with perioperative catabolism [1]. There is evidence that oral carbohydrate loading improves patient well-being for colorectal surgery [2]. We aimed to pilot this for elective caesarean delivery.

Methods: Ethics approval was waived by the local ethics chair. Over a six week period, four carbohydrate drinks (Nutricia Pre-op) were distributed to mothers scheduled for elective caesarean delivery. Instructions were given to drink two cartons at 10pm the night before and at 7am on the morning of surgery. Further drinks were available on the day of surgery to be prescribed at the discretion of the anaesthetist. Presence of ketonuria was tested for at the commencement of surgery using urinalysis (Ketostix, Bayer). The incidence of ketonuria was compared to a historical control group [1]. Fisher's Exact Test (two tailed) was used for statistical analysis.

Results: Twenty-two (30 percent) of 76 mothers were ketotic compared to 51 percent in the control group ($p = 0.016$). The spread of ketonuria over the operative period is displayed in figure 1.

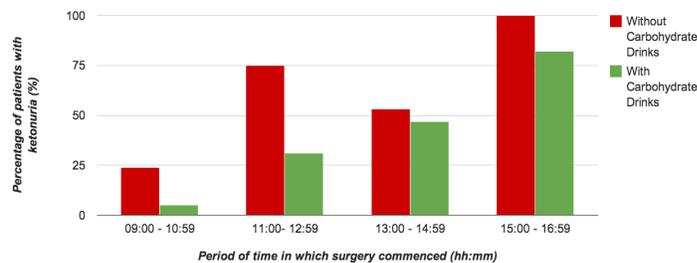


Figure 1: Incidence of ketonuria over the duration of the operative day.

Discussion:

Preoperative oral carbohydrate loading has resulted in a reduction in the incidence of perioperative ketonuria most notably in morning cases. Improving timely additional drinks for afternoon cases should extend the effect. Delivering best practice and evidence based care is the motto of enhanced recovery initiatives [3]. We suggest that this adds objective evidence for the introduction of preoperative carbohydrate drinks as part of Enhanced Recovery for Obstetric Surgery.

References

1. A. Clark, R. Agaram. Too fast? Ketonuria as a marker of prolonged fasting in elective caesarean section. *International journal of Obstetric Anaesthesia* (2014) Volume 23, Supplement 1, S1-S62.
2. Noblett SE, Watson DS, Huong H, Davison B, Hainsworth PJ, Horgan AF. Preoperative oral carbohydrate loading in colorectal surgery: a randomized controlled trial. *Colorectal Disease* (2006) Volume 8, 563–569.
3. Institution for Innovation and Improvement. Enhanced Recovery Programme. National Health Service. Website: http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/enhanced_recovery_programme.html accessed: 11th August 2014.