Preoperative oral carbohydrate administration to ASA III-IV patients undergoing elective cardiac surgery


In this study we investigated the effects of preoperative oral carbohydrate administration on postoperative insulin resistance (PIR), gastric fluid volume, preoperative discomfort, and variables of organ dysfunction in ASA physical status III-IV patients undergoing elective cardiac surgery, including those with noninsulin-dependent Type-2 diabetes mellitus. Before surgery, 188 patients were randomized to receive a clear 12.5% carbohydrate drink (CHO), flavored water (placebo), or to fast overnight (control). CHO and placebo were treated in double-blind format and received 800 mL of the corresponding beverage in the evening and 400 mL 2 h before surgery. Patients were monitored from induction of general anesthesia until 24 h postoperatively. Exogenous insulin requirements to control blood glucose levels < 0.01 and P = 0.06, respectively). Ingested liquids did not cause increased gastric fluid volume or other adverse events. The CHO group required less intraoperative inotropic support after initiation of cardiopulmonary bypass weaning (P < 0.05). In conclusion, preoperative CHO administration before cardiac surgery does not affect PIR. Clear fluids reduce thirst and may be recommended as a safe procedure in ASA III-IV patients. Further research is indicated to investigate possible cardioprotective effects of preoperative CHO intake.

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