Preoperative Fasting for Ambulatory Cataract Surgery: A Time-Interrupted Prospective Randomized Study (The PRACTICE Study)

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Introduction: Traditional fasting guidelines recommend nil per os (NPO) from midnight the night before elective surgery. Evolving recommendations from the American Society of Anesthesiologists and other jurisdictions suggest more flexible fasting durations for elective surgery, acknowledging minimal risks and potential benefits of reduced patient discomfort and increased scheduling flexibility without increased risk. We evaluated patient reported experience and distress of traditional versus modified fasting guidelines on patients undergoing routine cataract surgery.

Methods: In this prospective, time-interrupted, randomized study, adult patients undergoing routine cataract surgery at Kensington Eye Institute were included. Experimental group patients consumed up to 400mL of specified liquids up to three hours before their scheduled surgery time and were compared to patients who followed traditional fasting guidelines. Participants completed a validated questionnaire for fasting burden related to hunger, thirst, voice hoarseness, weakness, anxiety, and nausea both before and after surgery. Primary outcome was total fasting burden scores and secondary endpoints included individual questionnaire items, surgery cancellations, and aspiration incidence. Continuous data was reported as means with standard deviations, and categorical data as proportions with 95% confidence intervals. Data was analyzed with univariable and multivariable regression models. A p-value of less than 0.05 deemed statistically significant.

Results: 451 participants were recruited (241 controls). Average fasting durations were 14.26+6.80 for both solids and liquids and 3.80+1.15 hours for liquids for the control and experimental groups, respectively. Survey responses showed no statistically significant difference between the groups in total fasting-related burden, both pre- and post-operatively. Univariable model showed statistically significant decrease in anxiety level in the experimental group both pre-operative (0.243) and post-operative (0.171). Multivariable linear regression analysis revealed significant associations between the demographic patterns of: age and pre-operative hunger (0.022), post-operative weakness (0.014); time of surgery and pre-operative hunger (0.423), pre-operative thirst (0.298), pre-operative voice hoarseness (-0.306); gender and pre-operative thirst (0.451), post-operative thirst (0.439), post-operative weakness (0.409); amount of liquid consumed and pre-operative hunger (-1.965, -1.972, –2.987, respectively); amount of liquid consumed and pre-operative nausea (-1.195) and pre-operative voice hoarseness (1.291).

Conclusions: Statistically significant difference between the control and experimental group was not found yet, our intervention did show a statistically significant decrease in level of anxiety in the univariable model. However, this decrease was not seen in our multivariable model controlling for confounding factors. Other variables found to influence patient fasting-related burden were age, gender, time of surgery, and total amount of liquids consumed.