Effect of Intraoperative Dextrose Infusion for Prevention of Nausea and Vomiting after Diagnostic Gynecologic Laparoscopy

Background and objective:post operative and post discharge nausea and vomiting arecommon complications after surgery and anesthesia , especially after laparoscopicsurgery.More ever, there are not the sufficient studies on the effect of prophylactic administration of dextrose in reducing incidence and severity of PONV, Time of exposure is also important.Therefore,in this study,the effect of intraoperative(preventive) infusion of5% dextrose on control of nausea and vomiting aftergynecologic diagnostic laparoscopy was evaluated.

Material and methods:In this randomized , double-blind and placebo-controlled clinical trial , 70 women aged 20-40 years ASA Class Icandidated for infertility diagnostic laparoscopy in two study groups .The study group (n=35) received Ringer's solution10 ml / kg / h with dextrose 0/5 g / kg (glucose 50 %) and placebo group (n=35) received placebo with the same volume.studySolution was infused from before the induction ofanesthesiauntil the end of surgery. PONV was assessed in the PACU unit at 3 , 6 and 24 hours postoperatively using by 4 point scale (0 = no PONV, 1 = nausea , 2 = vomiting and 3 = vomiting >2) the first time to anti-emetic andoverall dose of anti-emetic.

Results: The overall incidence of PONV was significantly lower in this study group than the placebo group (22/85% vs 45/71% ; p = 0/03) . severity of PONV is also was lower in the study group (1/14 ± 0/32 vs 2/5 ±0/27; P =0/03).first request to anti-emetic was7/1 ± 1/13h after surgery in study group and5/71 ± 1/76h in placebo group (P =0/04).The total dose of anti-emetic alsowas 60 mg in the study group and 140 mg in the placebo group (p<0/001). The frequency of anti-emetic administration had significant differences among two groups(6 times vs 14;P =0/03).there wassignificant differences In before and after blood sugar values between two groups (p<0/01), but there was not significant differences in the changes of blood sugar values between two groups (P =0/46).

Conclusions: administration of IV dextrose during surgery decreased incidence and severity of PONV, increased of request to reduce the anti-emetic and reduced the overall dose of anti-emetic in patients undergoing gynecologic diagnostic laparoscopy.

Keywords: PostOperativeNausea and Vomiting ,Infusion of Dextrose , Prevention , Gynecologic Diagnostic Laparoscopy.