Superior Hypogastric Blockade for Postoperative Pain

Hande Gurbuz Aytuluk, MD[1,2], Ahmet Kale, MD, Prof[3], Gulfem Basol, MD[3], Canan Balci, MD, Assoc. Prof[1]

1: University of Health Sciences, Kocaeli Derince Training and Research Hospital, Department of Anesthesiology and Reanimation, 41900 Derince, Kocaeli, Turkey.

2: Kocaeli University School of Medicine, Department of Anatomy (PhD student), Kocaeli, Turkey.

3: University of Health Sciences, Kocaeli Derince Training and Research Hospital, Department of Gynecology and Obstetrics, 41900 Derince, Kocaeli, Turkey.

Trial registration: NCT03428152

Date of the document:

Initial Release: January 30th, 2018

Study Start (Actual): February 9th, 2018

Study Completion (Actual): July 24th, 2018

Last Update: February 17th, 2019

Objectives: Total abdominal hysterectomy cause significant postoperative pain. Intraoperative superior hypogastric block may be an alternative way for acute postoperative pain relief in patients undergoing hysterectomy. This study's objective is to evaluate the effect of intraoperative superior hypogastric blocks on postoperative pain management.

Design and Subjects: Sixty female patients who underwent elective abdominal hysterectomy were included in the prospective observational cohort study. Patients were divided into two groups: Patients who had intraoperative SHP block (Hypo; n=30), and patients who did not have intraoperative SHP block (No-Hypo; n=30).

Methods: Total sample size was determined by performing a power analysis. Thirty patients were recruited for each group (CI: 95%). Patients were divided into two groups: Patients who had intraoperative SHP block (Hypo; n=30), and patients who did not have intraoperative SHP block (No-Hypo; n=30). Patients who were under the age of 18, underwent epidural catheterization and / or additional pain management modalities (transversus abdominis plane blocks, local wound site infiltration, quadratus lumborum block... etc.), operated for malignancy, operated by using a different surgical approach (i.e. vaginal hysterectomy), and prescribed preoperative antidepressants or gabapentinoids were excluded from the study.

Duration of operation was calculated in minutes from incision to skin to skin closure. Postoperative pain assessed by 10 cm Visual Analogue Scale (VAS). Pain scores were assessed in post-anesthesia care unit (PACU), and at ward (at 1^{st}, 6^{th}, 12^{th}, 24^{th} and 48^{th} hours). Rescue analgesic time was calculated in minutes as the time interval between the last administration of analgesic intraoperatively and the first analgesic demand in surgical ward. Postoperative nausea and vomiting, hospital stay time, total analgesic requirements of patients in PACU and in surgical ward were recorded.

Statistical Analysis: Study data were analyzed by using IBM SPSS Statistics Version 24. Mann Whitney-U test was used for numerical values which do not meet normal distribution, independent sample t test was used for body mass index, Chi-square test was used to analyze the discrete variables, and p value <0.05 was considered statistically significant. Friedman's test /post-hoc test was used to analyze the repeated measures, and Wilcoxon signed-rank test was used for paired comparison of the repeated measures. Bonferroni corrected significance was considered as p<0,0033.

Ethical Consideration: This study was approved by the Kocaeli University's Institutional Review Board (IRB KÜGOKAEK #2017/285/14.22) and written informed consent was obtained from all subjects participating in the trial. All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation and with the Helsinki Declaration of the World Medical Association.