Comparison of Surgical Pleth Index (SPI) Controlled Fentanil Consumption with Traditional Methodology of Fentanyl Consumption in Laparoscopic Cholecystectomy Operations

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Objective: The aim of the present study was to compare Surgical Pleth Index (SPI) controlled analgesia were compared with analgesia made by conventional methods analgesic and anesthetic requirements during surgery hemodynamic stability, postoperative pain and postoperative recovery time in laparoscopic cholecystectomy.

Materials and Methods: In our research, our faculty General Surgery performed the laparoscopic cholecystectomy surgery clinic scheduled read and signed informed consent forms between the ages of 18-65 American Association of Anesthesiologists (ASA) classification according to the ASA 1-2 100 patients were included in the study. After receiving written and verbal consent from patients, according to a random sampling system the patients were randomly allocated into two groups: SPI control group (Group S n = 50) and conventional methods group (Group D n = 50). After the two groups in a standard way anesthesia began to surgery whether patients are intubated. After induction, 5th, 10th, 15th, 30th, 60th, 90th and 120th minute SAP, DAP, MAP, HR, SpO² and SPI values were recorded. While providing analgesia during the operation for the Group G patients in every half hour to 50 mg fentanyl was administered grup S until the patients surgical pleth index (SPI) value of the 50 when the 30 seconds remained were given, 50 mg fentanyl IV. Unexpected complications with desflurane and fentanyl total amount spent during the operation was recorded in the follow form. Ramsey sedation scores and the total duration of stay of patients in and out of the room was also recorded in the form of post-operative care.

Results: Patients in the study before anesthesia and surgery 5th, 10th, 15th, 30th, 60th, 90th, 120th groups in terms of hemodynamic data from the measurements are made in minutes, no statistically significant difference was observed. On the other hand, 60 minutes, measured in mean arterial pressure of intergroup value of p value as 0.051. This value can be considered statistically significant at p-value work that is very close to the number of cases may prove to be more significant. Induction is used in patients who received fentanyl and operations at the end of the study measured the total consumption of desflurane group comparisons revealed no statistically difference. However, in terms of total consumption of fentanyl, calculated at the end of the operation we found a statistically significant difference between the two groups (p<0.05). Ramsey Sedation Score and measured in terms of total group post-operative care room stay in room entrances and exits to the post-operative care of patients from the study found no statistically significant difference.
Conclusion: Patients who have similar surgical stress according to the results of our study as an alternative analgesia, we operate according to traditional methods Surgical Pleth Index controlled analgesia was also reduced opioid consumption with a lot of side effects, In addition to providing much needed analgesia for patients. different surgery on the subject and we believe that more needs to be done in larger studies with patients.

Keywords: Laparoscopic cholecystectomy, Surgical Pleth Æ¤ndex (SPI), Fentanyl, Ramsey Sedation Score