Pre-anesthetic administration of single-dose dexmedetomidine does not reduce postoperative fentanyl demand after gynecological laparotomy

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Background and Goal of Study: This prospective, randomized, double-blind, controlled study was designed to assess whether pre-anesthetic administration of dexmedetomidine reduce postoperative opioid consumption in patients receiving patient-controlled fentanyl after gynecological laparotomy

Materials and Methods: After approval of IRB and written informed consent, thirty-four patients scheduled for elective gynecological laparotomy were randomly assigned to receive normal saline (group N) or dexmedetomidine 1 µg/kg (group D) 10 min before induction of anesthesia. Patients used a patient-controlled analgesia (PCA) device to receive fentanyl for postoperative 24 hours. We recorded total cumulative fentanyl consumption, VAS for pain and the use of rescue analgesic drug at 30 m, 6 h and 24 h after start of PCA. Patient's satisfaction for pain control, other side effect (nausea, thirsty, sedation score) were recorded for corresponding time.

Results: There were no significant differences between groups in cumulative fentanyl consumption, pain score, and usage of additional analgesic drug (Table 1). The incidence of side-effects did not differ between the groups. Both group show similar SBP and DBP after anesthesia induction, whereas HR in group D showed significant lower than group N at 10 min after anesthesia induction (P=0.0002)

Conclusions: Administration of single dose dexmedetomidine (1 µg/ kg) given 10 min before anesthesia induction does not reduce postoperative fentanyl consumption of PCA and pain score in patient undertaken gynecological laparotomy.

		Group N (n=18)	Group D (n=16)	P-value
Fentanyl dose (ug/kg)	30 min	0.78±0.49	0.80±0.28	0.902
	6 hrs	3.73±1.21	3.27±1.10	0.255
	24 hrs	6.58±2.58	6.26±2.29	0.710
	Total	11.10±3.21	10.34±2.93	0.477
VAS for pain (100 mm)	30 min	65 (30-90)	55 (28-80)	0.196
	6 hrs	50 (20-65)	50 (28-63)	0.943
	24 hrs	40 (20-62)	35 (10-58)	0.315
Usage of additional drug		8	6	0.681 (Odds 1.32)
Satisfaction for pain control		7 (3-10)	7 (4.25-9)	0.958
Nausea		10	7	0.492 (Odds 1.58)
Thirsty		0	1	0.471
Sedation score		1 (0-2.15)	1 (0-2.25)	0.729

References

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