

LIST OF TABLES

Table	page
(I) Standard equipotent PCA solutions	19
(II) Comparison between the two studied groups according to sex	35
(III) Comparison between the two studied groups according to age (years)	37
(IV) Comparison between the two studied groups according to weight (kg)	39
(V) Changes in mean arterial blood pressure (mmHg) in group I	41
(VI) Changes in mean arterial blood pressure (mmHg) in group II	42
(VII) Comparison between the two studied groups according to mean arterial blood pressure (mmHg)	43
(VIII) Changes in heart rate (beats/min) in group I	44
(IX) Changes in heart rate (beats/min) in group II	45
(X) Comparison between the two studied groups according to heart rate (beats/min)	46
(XI) Changes in Oxygen saturation (%) in group I	47
(XII) Changes in Oxygen saturation (%) in group II	48
(XIII) Comparison between the two studied groups according to oxygen saturation spo2	49
(XIV) Changes in intraoperative End-tidal CO2 (mmHg) in group I	50
(XV) Changes in intraoperative End-tidal CO2 (mmHg) in group II	51
(XVI) Comparison between the two studied groups according to intraoperative End-tidal CO2 (mmHg)	52
(XVII) Changes in visual analogue scale in group I	54
(XVIII) Changes in visual analogue scale in group II	55
(XIX) Comparison between the two studied groups according to visual analogue scale	56
(XX) Morphine consumption in group II	57
(XXI) Comparison between the two studied groups according to dose of tramadol (mg)	58
(XXII) Comparison between the two studied groups according to the time for the first need of postoperative analgesia (min)	59
(XXIII) Comparison between the two studied groups according to postoperative nausea and vomiting	62
(XXIV) Changes in sedation scale in group I	65
(XXV) Changes in sedation scale in group II	66

Table		page
(XXVI)	Comparison between the two studied groups according to sedation scale	67
(XXVII)	Comparison between the two studied groups according to patient satisfaction score (1-3cm)	69

LIST OF FIGURES

Figure		page
(1)	Shows neospinothalamic tract and paleospinothalamic tract	2
(2)	Multiple pathways of nociceptive transmission from the spinal cord to central structures (A:spinoreticular, B:spinothalamic, C:spinomesencephalic and D: spinohypothalamic tracts)	3
(3)	Lateral view of the vertebral column	12
(4)	Fres. , Master PCA, Pilote CIS 3, France	17
(5)	Chemical formula of bupivacaine	20
(6)	Morphine chemical structure	23
(7)	Schematic of mu opioid receptor	24
(8)	Mu receptors and constipation	27
(9)	Comparison between the two studied groups according to sex	36
(10)	Comparison between the two studied groups according to age (years)	38
(11)	Comparison between the two studied groups according to weight (kg)	40
(12)	Comparison between the two studied groups according to arterial blood pressure (mmHg)	43
(13)	Comparison between the two studied groups according to mean heart rate (beats/min)	46
(14)	Comparison between the two studied groups according to oxygen saturation	49
(15)	Comparison between the two studied groups according to End-tidal CO2 (mmHg)	52
(16)	Comparison between the two studied groups according to visual analogue scale	56
(17)	Comparison between the two studied groups according to the time for the first need of postoperative analgesia (min)	60
(18)	Comparison between the two studied groups according to postoperative nausea and vomiting	63
(19)	Comparison between the two studied groups according to sedation scale	68
(20)	Comparison between the two studied groups according to patient satisfaction score (1-3cm)	69

LIST OF ABBREVIATIONS

5 HT	Serotonin , 5 hydroxy treptamin
AMP	Adenosine mono phosphate
ASA	American Society of Anesthesiologists
CHCA	Cholangiocarcinoma
CNS	Central nervous system
CO2	Carbon dioxide
CRPS	Complex regional pain syndrome
CSF	Cerebro spinal fluid
DOR	Delta opioid receptor
ECG	Electro cardio gram
EPCA	Epidural Patient controlled analgesia
EPI	Epidural
FRC	Functional residual capacity
GABA	Gamma amino butyric acid
HRV	Heart rate variability
IASP	International association for the study of pain
INR	International normalized ratio
IVPCA	Intravenous Patient controlled analgesia
KOR	Kappa opioid receptor
LAVH	Laparoscopically assisted Vaginal hysterectomy
LMWH	Low molecular weight heparin
MABP	Mean abdominal blood pressure
MEAC	Minimum effective analgesic concentration
MOR	Morphine opioid receptor
NMDA	N-methyl-D-aspartate
NSAIDS	Non steroidal anti inflammatory drugs
OP	Opioid receptor
PACU	Post anaesthesia care unit
PAG	Peri Aqueductal gray
PCA	Patient controlled analgesia

PCO₂	Carbon dioxide tension
PCP	phenylcyclidine
PONV	Posy operative nausea and vomiting
RR	Respiratory rate
TAP	Transversus abdominis plane block
TEA	Thoracic epidural analgesia
TENS	Trans cutaneous electrical nerve stimulation
TKA	Total knee arthroplasty
V/Q	Ventilation perfusion mismatching
VH	Vaginal hysterectomy