شبكة المعلومات الجامعية

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بسم الله الرحمن الرحيم

HANAA ALY

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قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
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Propofol-dexmedetomidine Versus Propofol-ketamine for Anesthesia of Endoscopic Retrograde Cholangiopancreatography (ERCP) (Comparative Study)

Thesis

Submitted for Partial Fulfillment of Master Degree in Anesthesia

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Mohamed Ayman Abd El-aziz

Abstract

Background: The ideal method for anesthetic management during ERCP varied between deep sedation and general anesthesia with preference for general anesthesia over sedation.

Aim of the study: Primary aim: The aim of this study will to compare the effects of propofol-dexmedetomidine and propofol-ketamine combinations for anesthesia in patients undergoing ERCP regarding the following outcome measures: Hemodynamic changes. Respiratory parameters changes. Propofol requirements. The recovery criteria. Post-operative pain. **Secondary aim:** To assess the rate of other anesthetic and procedural complications regarding the following outcome measures: Anesthetic complications: Post-procedural nausea and vomiting. Post-procedural cognitive dysfunction or hallucinations. Procedural complications: Bleeding: may occur by sphincterotomy. Duodenal perforation; it is a serious condition but it has a rare incidence and usually requires surgical intervention.

Material and methods: Patients ERCP, aged 20-50ys old, ASA I-II-III, were randomly allocated in two groups each of which was 25 by a probability method in the form of sequentially numbered, opaque, sealed envelopes (SNOSE) that will be divided in 2 groups (25 envelopes for each group) with random selection for each patient for an envelope. **Group-I** received dexmedetomidine loading 1µg/kg slow IV over 15min then infused at a rate of 0.5µg/kg/h by syringe pump. **Group II** received Ketamine 1mg/kg slow IV over 15min then infused at a rate of 0.5mg/kg/h by syringe pump. **Both groups** received propofol**;** 1-2mg/kg induction – then 5mg/kg/h IV infusion, 0.5mg/kg boluses guided by hemodynamic parameters, atracurium 0.5mg/kg intubating dose followed by 0.1mg/kg every 20min. Cuffed ETT was inserted and CMV. By the end of the procedure, patients turned supine and reversed by administration of neostigmine (0.05mg/kg) + atropine (0.01mg/kg). Extubation was performed after fulfillment of the criteria of extubation.

Conclusion: Dexmedetomidine-propofol combination was better than ketamine-propofol combination as regard; hemodynamic parameters (intra- and post-procedural), PONV, cognitive functions and recovery time. Incidence of pain had no clinical significant value between both groups. Total propofol consumption had no clinical significant difference between both groups.

Recommendation: Dexmedetomidine - propofol combination as TIVA technique for ERCP requires further studies with recommendation to include; different types of patients; geriatric, critically ill and increasing the sample size of patients.

Keyword: ERCP- TIVA- PONV- PPH-SOD

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List of Abbreviations

Abb.	Full term
ABP	Arterial Blood Pressure
ACLS	Advanced Cardiac Life Support.
ACTH	Adreno-Cortico- Trophic Hormone.
ADH	Anti-Diuretic Hormone.
ALT	Alanine Amino-Transferase
ALT	Alanine Amino-Transferase.
ASA	American Society of Anesthesiologists.
ASGE	American Society of Gastro-Enterology.
AST	Aspartate Amino-Transferase
AV	AV: Atrio-Ventricular.
α	Alpha
BP	Blood Pressure.
β	Beta
c-AMP	cyclic-Adenosine Mono-Phosphate.
CBF	Cerebral Blood Flow.
$CMRO_2$	Cerebral Metabolic Rate for o_2 consumption.
CNS	Central Nervous System
COP	Cardiac Output
CSF	Cerebro-Spinal Fluid
CT	Computed Tomography
ECG	Electro-Cardio-Graphy
EEG	Electro-Encephalo-Graphy
ERCP	Endoscopic Retrograde Cholangio-Pancreatography.
ETT	Endo-Tracheal Tube.
EUS	Endoscopic Ultra-Sound.
GA	General Anesthesia**.**
GABA	Gamma Amino-Butyric Acid.

List of Abbreviations Cont...

Abb.	Full term
GI	Gastro-Intestinal.
GIT	Gastro-Intestinal Tract.
h	Hour
H2	Histamine receptor type 2.
HBF	Hepatic Blood Flow.
HPS	Hepato-Pulmonary Syndrome.
HR	Heart Rate.
HRS	Hepato-Renal Syndrome.
ICP	Intra-Cranial Pressure.
IgG	Immuno-globulin G.
IM	Intramuscular.
INR	International Normalized Ratio.
IOP	Intra-Ocular Pressure.
IV	Intravenous.
IVC	Inferior Vena Cava.
LFTs	Liver Function Tests.
Log	Logarithm.
LT	Left.
MAP	Mean Arterial Pressure.
MELD	Mortality in End Stage Liver Disease without liver transplantation.
MRCP	Magnetic Resonance Cholangio-Pancreatography.
MRI	Magnetic Resonant Image.
NMDA	N-methyl-D-Aspartate.
NPO	NPO: Nothing Per Os.
NSAID	Non Steroidal Anti-Inflammatory Drugs.
PACU	Post-Anesthesia Care Unit.
PADS	Post-Anesthesia Discharge Scoring System.

List of Abbreviations Cont…

Abb.	Full term
PEEP	Positive End Expiratory Pressure.
PEP	Post-ERCP Pancreatitis.
PONV	Post-Operative Nausea and Vomiting.
PPH	Porto-Pulmonary Hypertension.
PSA	Procedural Sedation Analgesia.
PT	Prothrombin Time.
P-value	Probability value.
QT-c	QT interval corrected to heart rate.
R	Rectus.
RA	Regional Anesthesia.
RT	Right
S	Sinister
SA	Sino-Atrial.
SD	Standard Deviation.
Sec	Second
SOD	Sphincter of Oddi Dysfunction.
SPo_2	Oxygen saturation in pulsating blood flow.
SPSS	Statistical Program for Social Science.
TIPS	Trans-jugular Intra-hepatic Porto-systemic Shunt.
TIVA	Total Intravenous Anesthesia.
UOP	Urine Output.
US	Ultra-Sonography.
V/Q	Ventilation/ Perfusion.
VAS	Visual Analogue Scale.
Vd	Volume of distribution.

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