Pharmacokinetics and pharmacodynamics studies of a loading dose of cisatracurium in critically ill patients with respiratory failure

Panadda Panusitthikorn¹, Chuthamanee Suthisisang², Viratch Tangsujaritvijit³, Wichit Nosoongnoen⁴, Pitchaya Dilokpattanamongkol⁵*

^{1,2,4,5}Department of Pharmacy, Faculty of Pharmacy, Mahidol University, Thailand

³Department of Critical Care Medicine, Faculty of Medicine Ramathibodi Hospital, Thailand

Abstract (600 word limit)

Previous studies according a slow fibre bundle response with the presently counseled dose of cisatracurium in critically sick patients. Pharmacokinetic and pharmacodynamic studies of cisatracurium in critically sick patients area unit still restricted. To our data, this is often the primary study performed to higher perceive the pharmacological medicine (PKs) and pharmacodynamics (PDs) of a loading dose of cisatracurium and to spot factors that have an effect on PK and metallic element changes in critically sick patients. A prospective PKs and PDs study was designed. blood samples of ten critically sick patients with metastasis failure were collected once administering a loading dose of zero.2 mg/kg of cisatracurium. Plasma cisatracurium and laudanosine concentrations were determined victimisation liquid chromatography-tandem mass chemical analysis. A correlational statistics was found between cisatracurium concentration and simple protein levels and between pharmacological medicine information and patient factors [partial pressure of CO2 and metastasis alkalosis] (600 word limit).

Biography (200 word limit)

Pitchaya Dilokpattanamongkol Department of Pharmacy, Faculty of Pharmacy, Mahidol University, 447 Sri-Ayutthaya Road, Ratchathewi, Bangkok, 10400, Thailand. She is a Senior Nurse Therapist and a researcher who has developed a technique called Rebinding of the Body which helps people recover from trauma, learn self-help techniques and lead more productive lives. Presently, she has a small



private practice and she works as a consultant for Cogenz and Thought Leadership and Innovation Foundation. She graduated from the University of Western Ontario with Doctor of Philoso- phy in Nursing in 2009. Her dissertation was "Seeking and Obtaining Help for Alcohol Dependence by Women who have Posttraumatic Stress Disorder and a history of Intimate Partner Violence.

Email: pitchaya.dil@mahidol.ac.th

International Journal of anesthesiology and pain medicine

7TH INTERNATIONAL ANESTHESIA AND PAIN MEDICINE CONFERENCE October 27-28, 2022 Paris, France

About Research Topic(200 word limit)

The presently suggested loading dose of cisatracurium may not result in the required pharmacodynamic response in critically unwell patients with metastasis failure. A one-compartment PK model fits the concentration knowledge best in critically unwell Thai patients. during this paper, the PK parameters of cisatracurium displayed a small volume of distribution with reduced clearance compared with a previous study. to boot, alittle proportion of patients apace achieved the required metal response (monitored by clinical assessment and a TOF of 0/4). Therefore, an LD of 0.2 mg/kg of cisatracurium in critically unwell metastasis failure patients would possibly end in inadequate delayed patient-ventilator synchroneity, that could lead on to a rise in physical distress in these patients.

About Institution(200 word limit)

Establishment of "Medical University" in accordance with the Royal Decree establishing regulations of the Ministry of Public Health. Published in the Government Gazette, Part 16, Volume 59, dated 10 March B.E. 2442.1968 On June 7, 1968, there was a royal decree establishing the Faculty of Dentistry, Phayathai and Faculty of Pharmacy, Phayathai , in the "University of Medicine" to add two more faculties according to



government policies and projects. In the University Education Development Plan, 1967-1971, in the field of medicine, which wanted to increase the production of dentists and pharmacists. (Formerly there was already a Faculty of Pharmacy which has a location in the present area of Chulalongkorn University Therefore, the name of the new Faculty of Pharmacy has been established

References:

1. Landau R, Bernstein K, Mhyre J. Lessons learned from first COVID-19 cases in the United States. Anesthesia and Analgesia 2020.

2. Sutton D, Fuchs K, D'Alton M, Goffman D. Universal screening for SARS-CoV-2 in women admitted for delivery. New England Journal of Medicine 2020.

3. Imperial College London COVID-19 Response Team . Report 3: Transmissibility of 2019-nCoV. 2020.

4. Sanche S, Lin YT, Xu C, Romero-Severson E, Hengartner N, Ke R. High contagiousness and rapid spread of severe acute respiratory syndrome coronavirus 2. Emerging Infectious Diseases 2020.

5. Stahel PF. How to risk-stratify elective

surgery during the COVID-19 pandemic? Patient Safety in Surgery 2020.

6. Schwartz J, King CC, Yen MY. Protecting health care workers during the COVID-19 coronavirus outbreak -lessons from Taiwan's SARS response. Clinical Infectious Diseases 2020.

7. World Health Organization . Infection prevention and control of epidemic-and pandemic-prone acute respiratory diseases in health care. 2007.

8. Tran K, Cimon K, Severn M, Pessoa-Silva CL, Conly J. Aerosol generating procedures and risk of transmission of acute respiratory infections to healthcare workers: a systematic review. PLoS One 2012; 7: e35797 International Journal of anesthesiology and pain medicine ANESTHESIA AND PAIN MEDICINE CONFERENCE October 27-28, 2022 Paris, France Volume 7. Is

Volume 7, Issue 4 ISSN NO: 2471-982x

9. <u>Wax RS, Christian MD. Practical</u> recommendations for critical care and anesthesiology teams caring for novel coronavirus (2019-nCoV) patients. Canadian Journal of Anesthesia 2020; 67: 568–76.

10. Warren J, Sundaram K, Anis H, et al. Spinal anesthesia is associated with decreased complications after total knee and hip arthroplasty. Journal of the American Academy of Orthopaedic Surgeons 2020; 28: e213–e221.