

ABSTRACT

Drug Utilization of Analgesics in Traumatic Brain Injury (Study at ROI IGD and IRNA Bedah Flamboyan RSUD Dr. Soetomo Surabaya)

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Background: Traumatic brain injury (TBI) is a major cause of disability, death, and economic cost to our society. Physiological changing associated with traumatic brain injury wich leads pain. Pain arises from scalp injury and the increase of intracranial pressure on secondary TBI can also trigger pain. Untreated acute pain in TBI patients can cause increased catecholamine and stress hormone level which are potential causes of tachycardia, hypertension, increased oxygen requirement and decreased tissue perfusion. A variety of pharmacological agents have been advocated to treat pain in TBI patient includes opioid analgesics and non-opioid analgesics.

Objective: The aim of this study was to identify drug utilization of analgesics and investigate any *Drug Related Problems* (DRPs) from the usage of analgesic in TBI patient.

Method: It was prospective observational descriptive study using time limited and total population sampling that conducted during March to May 2015.

Result: The result showed that from 77 patients, men have greater prevalence of TBI than women. Traffic accidents (79.22%) and falls (14.28%) were the common cause TBI. There were seven type of analgesics used, they were morphine (2.61%), fentanyl (25.97%), tramadol (27.3%), ketorolac (49.35%), mefenamic acid (1.3%), metamizole (89.61%) and paracetamol (54.55%). There were three DRPs that identified in this study. They were over dose, potential adverse reaction, and drug interaction between analgesic and other therapy.

Conclusion: From the explanation above, analgesic use in TBI patient requires a careful consideration in achieving desired outcomes.

Keywords: analgesics in traumatic brain injury, ketorolac, metamizole, pain, drug utilization study, drug related problems.