

CHAPTER 1

INTRODUCTION

1.1 Background

Pain is an unpleasant sensory and emotional sensation that is linked to, or resembles, real or possible tissue injury (Raja *et al.*, 2020). It is one of most common reasons for physical consultation and can lead to an interferent of a person's quality of life (Breivik *et al.*, 2008). The effect of pain on the quality of human life is significant, both physically and psychologically, thus any measurement is considered to relieve pain. Simple pain medications are effective in 20%-70% of cases (Moore *et al.*, 2015).

Despite the fact that pain relief is a fundamental right, the majority of critical care patients will suffer pain at some point during their stay in the ICU, notably when clothing, changing positions, and even repose, and this can be a major source of stress. Because of altered levels of consciousness, mechanical ventilation, or large doses of sedatives or muscle relaxants, the majority of critical care patients may be unable to self-report their pain vocally or with other signals. In both medical and surgical ICU patients, the incidence of considerable pain is still 50% or greater (de Jong *et al.*, 2013).

These individuals have procedural pain in addition to resting pain, pain from surgery, trauma, burns, and cancer. It's ubiquitous, and insufficient procedural pain therapy is still a major issue for ICU patients. Bathing, back and pressure point massages, sheet changes, and repositioning are the most common uncomfortable nursing care treatments in ICU patients. In a study of 96 medical surgical patients, Vazquez *et al.*, 2011, analysed pain intensity during 330 turnings and found that there was a significant difference in pain score between rest and turning. The bolus of analgesic was used in less than 15% of the turnings.

Regardless of the clinical situation, a complete pain assessment is required. Location, features, severity, start, progression, duration, quality, radiation, relieving and exacerbating

factors, and effects of past therapy should all be included in pain assessments. This information assists clinicians in determining the underlying cause of pain as well as the treatment strategies that will be used. Sedatives and analgesics play important role in pain management in the ICU (Go, Cole and Broglio, 2013).

Opioids are the principal analgesics used in the ICUs because of potency, concomitant mild sedative and anxiolytic properties, and their ability to be administered by multiple routes. Morphine, fentanyl, and hydromorphone are the most common opioids administered in ICUs (Marino and Sutin, 2007). Paracetamol, NSAIDs (non-steroidal anti-inflammatory drugs), Ketamine, Clonidine, and Dexmedetomidine are examples of non-opioid analgesics that are routinely used (Hariharan and Garg, 2017).

The effect of using analgesics in dealing with pain is enormous that it is used widely around the world. Conaghan on *A Turbulent Decade for NSAIDs: Update on Current Concepts of Classification, Epidemiology, Comparative Efficacy, and Toxicity*, 2011, mentioned that NSAIDs are one of the most commonly used drugs worldwide, with over 30 million people taking them every day. Annually, more than 111 million prescriptions are written for NSAIDs in the USA, accounting for roughly 60% of the over-the-counter (OTC) analgesic industry while opioids are used by about 58 million people worldwide (WHO, 2018).

Although the number of opioid users in the world is very large, Indonesia is still one of the lowest users in the world. In the use of morphine, a form of opioid, Indonesia is only in the figure of 0.054mg/capita compared to developing countries such as the USA, Canada and Denmark that consumed 50 mg/capita in 2009. The underuse of opioids in can be attributed to a number of factors. Incompetence of medical professionals in assessing pain, patients' unwillingness to articulate the degree of their suffering, doctors' and patients' aversion to using opioids owing to fear of addiction, and a lack of ability and understanding

among health-care workers are just a few of the significant roadblocks. (Setiabudi *et al.*, 2015).

While useful, analgesics can cause detrimental effects if not used according to its indications and regulations. It also come along with adverse effects, contraindications, and toxicity. NSAIDs have well-known adverse effects that affect the gastric mucosa, renal system, cardiovascular system, hepatic system, and hematologic system (Ghlichloo and Gerriets, 2021). Opioid drugs produce a broad spectrum of adverse effects for its distribution of opioid receptors both within and outside the nervous system. Those adverse effects including dysphoria, euphoria, sedation, respiratory depression, constipation, suppression of endocrine systems, cardiovascular disorders, convulsion, nausea, vomiting, pruritus, and miosis (Cohen, Ruth and Preuss, 2021).

Clinicians should be more mindful of the possibility of long-term impacts, and they should use tactics that optimize benefit while limiting risk. Frequent assessments for pain, anxiety, and agitation using a reproducible scale; combination therapy combining opioids and sedatives; and, most importantly, careful communication among team members, with a special recognition that the bedside nurse must be empowered to pair assessments with drug manipulation (Schweickert and Kress, 2008).

Analgesics are one of the most widely used drug groups. However, research on the use of analgesics in Indonesia, especially in Surabaya, specifically in Intensive care RSUD Dr. Soetomo Surabaya is still none. The lack of data and research on the analgesic profile including indications, adverse effect, contraindications, and toxicity were my main reason for conducting this study.

1.2 Problem Formulation

How is the analgesic profile in Intensive Observation Ward (*ROI/Ruang Observasi Intensif*) at RSUD Dr. Soetomo Surabaya?

1.3 Research Objectives

The purpose of this research based on the problem formulation above are:

1.3.1 General Objective

To obtain the analgesic profile used in the Intensive Observation Ward (*ROI/Ruang Observasi Intensif*) at RSUD Dr. Soetomo Surabaya.

1.3.2 Specific Objective

To analyse the indication, adverse effects, contraindications, and toxicity within the analgesic profiles used in the Intensive Observation Ward (*ROI/Ruang Observasi Intensif*) at RSUD Dr. Soetomo Surabaya.

1.4 Research Benefits

1.4.1 Theoretical Benefit

To give update toward the knowledge of analgesics used in certain area, specifically in the Intensive Observation Ward (*ROI/Ruang Observasi Intensif*) at RSUD Dr. Soetomo Surabaya.

1.4.2 Practical Benefit

Medical doctors will be able to use the knowledge of this study to understand the types of analgesics used in the Intensive Observation Ward (*ROI/Ruang Observasi Intensif*) at RSUD Dr. Soetomo Surabaya according to its indications and regulations.