CHAPTER I

INTRODUCTION

1.1 Background

Urinary tract infections (UTIs), one of the most common nosocomial infections in hospitals, are highly likely to occur in older adults with urinary catheters, according to Risdinar et al., (2021). According to their research, the use of catheters, especially for long periods of time, contributes greatly to the increased incidence of UTIs. According to research conducted at Dr. H. Abdul Moeloek Hospital, individuals who had catheters in place for more than three days were 33 times more likely to develop UTIs than those who had catheters in place for less than three days. This is because the likelihood of bacteriuria increases by 5–10% every day due to bacterial colonization, which can occur immediately after catheterization (Kumala et al., 2021).

Other factors that contribute to the risk of UTI in older adults with catheters include a compromised immune system and difficulty maintaining personal hygiene. Older adults often experience declines in cognitive and physical function, making them less able to care for themselves effectively. In a study by Hidayat, (2015), it was found that most UTI patients among the elderly were women, with the highest age characteristics ranging between 56-65 years..

Very high rates of urinary tract infections (UTIs) have been found in Indonesia, especially among elderly adults who use catheters. According to a report by dr. Ida Effendi et al. (2024), UTI is the second most common cause after pneumonia in the elderly, with risk factors including comorbid diseases,

nutritional status, and cognitive impairment. In the elderly population, it is estimated that around 25% experience UTI, and this risk is increased in those who use urinary catheters. In East Java, the prevalence of UTI is also quite high. Research shows that the incidence of UTI in Indonesia is in the range of 90-100 cases per 100,000 population per year, around 180,000 new cases per year (Mano et al., 2023).

According to Ningsih EP (2016) The impact of aging on mobility is also closely related to the increased risk of infection, especially Urinary Tract Infection (UTI). The inability to move properly can cause urinary stagnation, which increases the likelihood of infection. In addition, elderly people with limited mobility often have difficulty maintaining personal hygiene, increasing the risk of contamination and infection.

A study from Asda et al., (2024) revealed that UTIs account for approximately 40% of all hospital infections, with catheters being the source of 80% of these infections. The presence of a catheter can increase the risk of infection, with infection rates ranging from 3-10% per day depending on the length of time the catheter is in place.The risk of urinary tract infections increases with age and the length of time the catheter is in place. For example, a person is more likely to develop a UTI if they have had a catheter in place for more than six days (Irawan & Mulyana, 2018).

According to Dr. Ida Effendi et al., (2024) The increased morbidity rate due to UTI in the elderly can be seen from various health aspects. Fever, discomfort during urination, and mental disorders are more severe symptoms

often experienced by elderly people with UTI compared to younger groups. These symptoms can worsen pre-existing health conditions, such as diabetes or heart disease, increasing the risk of further complications.

To address mobility issues and infection risks in the elderly, interventions such as physical exercise and rehabilitation therapy are essential. Exercises such as range of motion (ROM) can help improve joint stability and muscle strength, thus supporting better mobility (Uda et al., 2017). Rehabilitation programs specifically designed for older adults can help restore their physical function and reduce the risk of falls and infections.

A number of integrated solutions can be used to address mobility issues as a risk factor for urinary tract infections (UTIs) in older adults using urinary catheters. In order for older adults to remain active and healthy in their daily lives, they need to be given more attention. According to recent studies, the incidence of UTIs in older adults is significantly correlated with mobility limitations, considering the importance of attention to this aspect in health care.

From the above phenomenon, by understanding the impact of mobility on the risk of infection, researchers are interested in conducting research on "The Relationship between Mobility and the Incidence of Urinary Tract Infections (UTIs) in the Elderly Who Use Catheters." which aims toanalyze, identify, and measure the prevalence of the relationship between mobility and UTI incidence in elderly people who use urinary catheters. Researchers hope that with this study, health workers can develop more effective prevention

strategies to protect the health of the elderly, especially those who use urinary catheters.

1.2 Problem Formulation

Based on the background above, the author formulates the problem as follows: "Is there a relationship between mobility and timing of urinary tract infections incidence in the elderly who use urinary catheters?"

1.3 Research Objectives

1.3.1 General Objectives

To analyze the relationship between mobility and timing of urinary tract infections incidence in elderly people using urinary catheters.

1.3.2 Specific Objectives

1. Identifying the level of mobility of elderly people using urinary catheters in the inpatient ward of IHC Lavalette Hospital Malang City.
2. Measuring the prevalence of timing of urinary tract infections incidence in elderly people using urinary catheters in the inpatient ward of IHC Lavalette Hospital Malang City.
3. Identifying the relationship between mobility levels and timing of urinary tract infections incidence in the inpatient ward of IHC Lavalette Hospital Malang City.

1.4 Research Benefits

1.4.1 Theoretical Benefits

The results of this study can provide an explanation of the relationship between mobility and timing of urinary tract infections incidence in the elderly who use urinary catheters, as well as to add references in the study of gerontological nursing and infectious diseases as a basis for further research.

1.4.2 Practical Benefits

1. For Health Workers

   Provide recommendations for health workers to prevent UTI in the elderly by increasing mobility.

2. For Researchers

   For researchers, they can apply research methods in the field of nursing, especially regarding mobilization and urinary tract infections.

3. For the Community

   As a guideline for families or caregivers in caring for the elderly who use urinary catheters.