Description of Pain Levels in Gout Arthritis Patients in the Kertosari Work Area for the Period February – April 2025.

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ABSTRACT

Gouty arthritis is a musculoskeletal disease that primarily affects the joints, characterized by the main symptom of pain due to the accumulation of monosodium urate crystals, which triggers an inflammatory response. The purpose of this study was to determine the description of the level of pain in gouty arthritis patients in the Puskesmas Kertosari Working Area for the period February-April 2025. This research method used a descriptive case series survey research design with a purposive sampling technique on 24 respondents according to the inclusion criteria. The instrument used was the Verbal Rating Scale (VRS). The results of this study showed that half of them experienced severe pain 50% with the characteristics of respondents almost half aged 61 - 68 years (37.5%), and most were male (58.3%). The description of the level of pain in gout arthritis patients shows severe pain with characteristics of young elderly age and male gender. The results of this study can be used as a guideline in pain management in gouty arthritis and can become a reference for further research.

Keywords: *Gout arthritis, Physical activity, Pain*, *Verbal Rating Scale*

INTRODUCTION

Gout arthritis is one of the second most common non-communicable diseases after hypertension, with increasing incidence and mortality [1]. Gout arthritis is a disease that most often appears in the musculoskeletal system, especially the joints, with the main symptom being pain caused by monosodium urate crystals that accumulate on the inside and outside of the joints and cause an inflammatory response [2]. Severe pain and joint swelling, as part of an inflammatory response in the metatarsophalangeal joints, are common in gout and can lead to decreased daily activities [1,3].

One of the non-communicable diseases that attacks joints with the highest incidence rate in Indonesia is gout arthritis, and the global prevalence of incidents continues to increase in 2025 to around 355 million people, with a risk of approximately 25% of sufferers experiencing paralysis [4]. World Health Organization (WHO) data in 2021 shows the incidence of gout arthritis is 20% in the world, with an incidence rate of 5-10% suffered by the age of 5-20 years, 20% suffered by the age of 60 years and above, and the age of 45-50 years suffered mostly by women [4,5]. The 2018 Basic Health Research (Riskesdas) stated that the incidence of gout arthritis in Indonesia continues to increase, as seen from medical diagnoses and symptoms that appear in sufferers, amounting to 11.5% and 24.7%, based on age and gender,

most gout arthritis sufferers are aged ≥ 75 years (54.28%), and are male (6.13%) less than female (8.46%) [2,6]

Symptoms that arise in gout arthritis occur due to excess purine metabolism, which can be caused by several risk factors, including foods high in protein and purine, genetics, alcohol consumption, and obesity [7–10]. The initial response felt by patients with gout arthritis is acute pain in one of the joints accompanied by fever, complaints will improve for some time until there are no symptoms and reappear as chronic pain, causing problems with physical mobility, sleep rest and social interaction[11,12] .The accumulation of uric acid due to high levels of purine in the body forms monosodium urate, which causes joint damage and an inflammatory reaction with symptoms of pain and fever in the surrounding area that affect psychological and physical health, such as stress with symptoms of increased anxiety and vital signs [13]. The impact that can occur if not handled properly is morbidity that causes paralysis and disruption to daily activities, organ failure, and death [4]

Actions taken to prevent and recover from gout arthritis can be carried out through pharmacological and non-pharmacological therapy. Pharmacological therapy is given in an effort to reduce purine levels by administering Xanthine Oxidase Inhibitors and Uricosurics, and to reduce the main symptoms of gout arthritis, namely acute pain in the joints, by administering Non-Steroidal Anti-Inflammatory Drugs [14–17]. Non-pharmacological therapy can be carried out by providing health education, a low-purine diet, exercise, and complementary therapy, by providing distraction and relaxation for pain complaints, or by reducing uric acid levels in the blood [7,18,19]. Based on the above background, researchers are interested in researching the Description of Pain Levels in Gout Arthritis Patients in the Puskesmas Kertosari Work Area.

METHOD

This research employs a descriptive research design with a quantitative approach, aiming to determine the level of pain in gout arthritis patients within the Kertosari Community Health Center's work area by presenting the frequency distribution data for age and gender. The population in this study was 25 gout arthritis patients in the Kertosari Community Health Center work area using a purposive sampling technique and the Slovin formula (n=N/(1+N(d)2), resulting in a sample of 24 respondents who met the inclusion criteria, namely gout arthritis sufferers who experienced pain. This research instrument used a Verbal Rating Scale (VRS) pain intensity assessment sheet, namely a verbal pain score with a verbal explanation scale which is an independent statement and consists of several statements in an effort to describe the frequency and duration of pain, the interpretation of the VSR is centered on the pain felt such as no pain, mild pain, moderate pain, severe pain with a score of four to fifteen [20]. The pain assessment score in this study ranges from 0, indicating no pain, to 3, indicating severe pain. This research protocol has been ethically reviewed and approved by the Health Research Ethics Commission of the Banyuwangi Health Sciences College with No. 143/01/KEPK-STIKESBWI/II/2024-2025.

RESULT

The study involved 24 respondents with gouty arthritis experiencing pain in the Kertosari Puskesmas work area. Results were obtained through data collection on age, gender, education, occupation, and pain level using the VSR pain intensity assessment sheet.

The frequency distribution by age and gender of gouty arthritis patients in the Kertosari Community Health Center work area from February to April 2025, based on Table 1.1, shows that almost half were aged 61–68 years (9 respondents) (37.5%), with the majority being male (14 respondents) (58.3%), with almost half having a high school education (11 respondents) (45%), and the majority working in the private sector (18 respondents) (75%).

Table 1.1 Frequency Distribution of Age and Gender of Gout Arthritis Patients in the Kertosari Community Health Center Work Area for the Period February-April 2025

Variables	Frequency	Percentage
Age		
36 – 40 Years	6	25,0 %
41 – 50 Years	6	25,0 %
51 – 60 Years	3	12,5 %
61 – 68 Years	9	37,5 %
Gender		
Male	14	58,3 %
Female	10	41,7 %

The pain level of gout arthritis patients in the Puskesmas Kertosari work area for the period February-April 2025, according to Table 1.2, shows that half (12 respondents) experienced severe pain.

Table 1.2 Pain Level of Gout Arthritis Patients in the Kertosari Community Health Center Work Area for the Period February-April 2025

Characteristics	Amount	Prosentase
Low	5	20,8 %
Medium	7	29,2 %
High	12	50,0 %
Total	24	100 %

DISCUSSION

Description of pain levels The level of gout arthritis patients in the Kertosari Community Health Center work area for the period February - April 2025 shows that half of them experienced severe pain with the characteristics of respondents being almost half aged 61 - 68 years (9 respondents) (37.5%), and most of them were male (14 respondents) (58.3%).

Pain is a response to nociceptive and neuropathic stimuli that cause discomfort due to tissue discontinuity influenced by psychological factors and previously felt pain [21]. Pain in gout arthritis is caused by inflammation of the joints, with signs and symptoms of swelling in the joints and pain that varies from mild to severe, with a prevalence that continues to increase with age [20]. Pain in gout arthritis is the most severe chronic pain at the age of 65-70 years and is felt more severely at the age of 65 years [20,21]. The 2014 Basic Health Research report shows that arthritis (inflammation of the joints) is a disease that is often suffered by the elderly, second only to hypertension, with general complaints of joint pain in approximately 8.5% of the elderly, characterized by persistent chronic pain that has an impact on increasing dependence on daily activities and causing a decrease in the elderly's self-confidence[22]. Elderly age shows a physiological and biological change that is increasingly declining in the body's system, so there is a risk of experiencing health problems due to decreased function. In gout arthritis, there is a decrease in the ability of the kidneys to carry out their function, which causes the excretion of uric acid to be delayed and to accumulate in the joints[23].

The incidence of gout arthritis increases at the age of 78-84 years, and in men, the incidence is 20 times higher than in women because men have higher uric acid levels than women [3]. The results of data collection on characteristics based on gender in this study are in line with previous studies, stating that gout sufferers are more common in men (52%) than women (48%) [24]. The influence of gender on the incidence of gout arthritis shows that there are more men than women. This can be caused by the hormone that women have, namely the estrogen hormone, which can increase the secretion of uric acid in urine, which is usually

called uricosuric, so that the incidence of gout arthritis in women is lower, especially before menopause [25].

CONCLUSION

The description of the level of pain in gout arthritis patients in this study shows severe pain with age characteristics that occur more frequently in young elderly people and gender characteristics that occur most frequently in men. The results of this study can be used as a guideline for pain management in gout arthritis and as a reference for future research to develop other research methods.

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