

Characteristics of Senile Pruritus Patients at Haji Adam Malik General Hospital Medan in 2016-2018

M. R. Nuzulsari*, Ariyati Yosi**, Siti Syarifah***, Ramona Dumasari Lubis**

*Medical Student, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia

**Departement of Dermatology and Venereology, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia

***Department of Pharmacology, Faculty of Medicine, Universitas Sumatera Utara, Medan, Indonesia

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Abstract

Background: Pruritus or itch is a sensation in the skin that provokes the desire to scratch. Pruritus is one of the most common skin complaints in the elderly. The world's population is currently in the era of aging population. This change in demographic distribution creates growth challenges in the elderly with pruritus. Senile pruritus is described as chronic pruritus of unknown origin or cause in each elderly individual and has not been properly diagnosed.

Objective: This study aims to determine the characteristics of senile pruritus patients at Haji Adam Malik General Hospital Medan in 2016-2018.

Method: This research is a descriptive study with cross sectional research design, using secondary data derived from medical records at Haji Adam Malik General Hospital Medan in 2016-2018. The sample of his study was selected by the total sampling method of all medical record data that met the research criteria.

Result: There were 53 senile pruritus patients enrolled in three years. The most age group is 60-69 years (47.2%). More men than women (60.4%; 39.6%). Lowland (84.9%) is the most dominant residence. The level of education most attained was senior high school (56.6%). History of drug use (81.1%) is most found in senile pruritus patients.

Conclusion: This study describes the characteristics of senile pruritus at Haji Adam Malik General Hospital Medan in 2016-2018. The characteristics of patients are young elderly people aged 60-69 years old, male, living in the lowlands, high school education level, with a history of previous drug use.

Index term: Characteristics, Pruritus, Senile

I. INTRODUCTION

Pruritus/itch is a sensation in the skin that provokes the desire to scratch.¹ Pruritus is one of the most common skin complaints in the elderly.² This related to senility experienced by the elderly. Senility is a physical and mental setback that is associated with old or senile age.³ Senile skin that dry and easily fissured is easily pruritic.⁴ Sometimes, dry skin (xerosis cutis) is discovered by chance and is not the main cause of pruritus. The pathophysiology of senile pruritus in not fully understood, but cutaneous nerve and skin changes due to aging, play an important role in trigerring pruritus.⁵⁻⁶

Some studies around the world found various prevalences of pruritus in elderly. Those are as follows: 6.4% in Tunisia, 14.2% in Taiwan, 18.9% in Italy, 22% in Iran, 25% in Mexico, 34.8% in Poland, 41% in Thailand, 9.5% in Turkey, 44% in India, and 19.69% in Indonesia.⁵⁻⁸

The current world population is in the age of aging population aged 60 years and over exceeding 7 percent of the population. This condition shows that Indonesia is transitioning towards an aging population structure. And now, the province of North Sumatera has entered an era of aging population.⁹ This change in demographic distribution creates growth challenge in the elderly with pruritus. Senile pruritus is described as chronic pruritus of unknown origin or cause in each elderly individual and has not been properly diagnosed.⁶⁻¹⁰

Although research on senile pruritus mostly done, but the characteristics of senile pruritus patients in Indonesia are still few, so researcher want to find out the characteristics of senile pruritus patients at Haji Adam Malik General Hospital Medan.

II. METHOD

This is a descriptive study with cross sectional design using secondary data obtained from the Haji Adam Malik General Hospital Medan medical records. All medical records selected based on inclusion and exclusion criteria were included in this study. Subjects were senile pruritus patients aged 60 years and over, both men and women who have information on residence and education level, also with or without a history of previous drug use who were seeking treatment or were consulted to the Department Dermatology and Venereology Haji Adam Malik General Hospital, Medan in 2016-2018. All data collected and arranged in the form a table that includes the frequency and percentage of the sample. Haji Adam Malik General Hospital located in Medan city, North Sumatera province, Indonesia.

III. RESULT

Total number of senile pruritus patients at Haji Adam Malik General Hospital Medan in 2016-2018 were 68 and 53 of them were the subject of this study. Characteristics of the subjects in this study are shown based on patients sociodemographics (Table 1) include age, gender, residence, and education level, as well as a history of previous drug use. Total from 53 subjects enrolled in this study, majority of them were in the age group of 60-69 years (47.2%), 60.4% subjects were male and 39.6% subjects were female. The residence distribution of subjects in this study majority in the lowlands (hot temperature) (84.9%). The highest distribution in the education level was senior high school (56.6%).

Table 1 Demographic Characteristics of Senile Pruritus Patients

Variable	N	%
Age (years)		
60-69	25	47.2
70-79	20	37.7
≥80	8	15.1
Gender		
Male	32	60.4
Female	21	39.6
Residence		
Lowlands (hot temperature)	45	84.9
Highlands (cold temperature)	8	15.1
Education		
Not Graduated from Elementary/ Not in School Yet	2	3.8
Elementary School	7	13.2
Junior High School	4	7.5
Senior High School	30	56.6
University	10	18.9

Based on a history of previous drug use in this study showed 81.1% subjects had a history of drug use before were diagnosed with senile pruritus. And antihypertension drug is the most common drug that found in them.

Table 2 History of Previous Drug Use of Senile Pruritus Patients

History of Previous Drug Use	n	%
Yes	43	81.1
No	10	18.9

IV. DISCUSSION

Out of 53 subjects of senile pruritus in this study, majority of them were in the age group of 60-69 years (47.2%). A similar study by Goyal et al in India also showed that out of 610 patients, 55.6% were 60 – 69 years.¹¹ In contrast, several studies conducted in Iran showed an increase in the prevalence of pruritus with increasing age, 20.8% in the 60 – 69 years patients, 22.9% in the 70 – 79 years patients and 26% in the age group 75 years and above. Skin aging plays an important role in the pathophysiology of pruritus in older population. The skin becomes drier and feels itchy.¹² In addition, sociodemographic factors need to be reviewed in this study. As well as data from the Central Statistics Agency which shows that the elderly population in the province of North Sumatra is dominated by the age group 60-69 years.⁹

The highest gender proportion was male, 32 subjects (60.4%) and 21 subjects (39.6%) were female. A similar study by Jindal et al in India reported of 125 patients, 74 patients were men and 51 patients were women.¹³ Lee et al in Korea reported male to female ratio of 6:4.¹⁴ On the other hand, a Turkish study reported male to female ratio of 1:1.7.⁷ A study in India also reported of 282 patients, 162 patients were women and 120 patients were men.¹⁵ Study Valdez-Rodriguez et al in Mexico reported of 182 patients, 62.1% were women and 37.9% were men. This study showed that elderly females tend to have a higher VAS, longer itch duration (in months), increased frequency of pruritus, and to postmenopausal skin changes, when compared with males.¹⁶

The residence distribution of subjects in this study majority in the lowlands (hot temperature) (84.9%). A study in Mexico found pruritus frequency is the highest in the winter. It is well known that dry, cold weather could affect the skin barrier. Some of these changes have been related to xerosis in the elderly.¹⁶ This xerosis is caused by a chronic skin hydration problem. Aquaporin-3, a membrane channel that allows the passage of glycerol and water, is significantly reduced in the skin of people aged 60 years and over. The decrease in the lipid formation capacity and fluid loss affect the epidermal barrier function and could contribute to senile pruritus.⁶

The highest distribution in the education level was senior high school (56.6%). An Indonesian study in 127 patients found that high school or less is the second common after the unknown education level.⁵ But the results obtained in this study are not too specific because the number of samples is relatively small and cannot represent every elderly population in Indonesia, especially in the province of North Sumatera. However, this result similar with other research conducted in Indonesia by Yusharyahya S et al. which states that geriatric patients with pruritus are more experienced in primary to secondary education groups.⁵ Valdez-Rodriguez et al in Mexico also reported of 182 geriatric patients with pruritus, 84.6 % were high school or less.¹⁶

A history of previous drug use in this study showed 81.1% subjects had a history of drug use before being diagnosed with senile pruritus. A similar study by Cho et al in Korea also showed that patients undergoing targeted therapy suffer from pruritus frequently and severely.¹⁷ Pruritus in elderly people can frequently be induced by drugs, because the high frequency of chronic disease in this population exposes them to absorption of numerous drugs, sometimes simultaneously.⁶ Almost any drug may induce pruritus by various pathomechanisms. Most of the medications including angiotensin-converting enzyme inhibitors, antibiotics, antidepressants, antidiabetics, and drugs are likely to cause generalized pruritus.¹⁸ Increased pruritogen release (histamine, serotonin, neuropeptides), neurological changes and neuronal deposition in the skin are thought to induce pruritus, but the pathogenesis of pruritus caused by drugs is not fully understood.¹⁹

V. CONCLUSION

Based on this study, it can be concluded that from 68 senile pruritus patients who went to Haji Adam Malik General Hospital Medan in 2016-2018 there were 53 subjects that met the inclusion and exclusion criteria. The data obtained the characteristics of senile pruritus patients in this study based on sociodemographic, most commonly found in people aged 60-69 years (47.2%), male (60.4%), living in the lowlands (84.9%), and high school education level (56.6%). Then, the subjects who had a history of previous drug used is 81.1%.

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AUTHORS

First Author- Faculty of Medicine, Universitas Sumatera Utara, syarifah8512@yahoo.com

Second Author- Ariyati Yosi, Department of Dermatology and Venereology, Faculty of Medicine, Universitas Sumatera Utara, ariyatiyosi_ppds@yahoo.com

Third Author- Siti Syarifah, Department Pharmacology, Faculty of Medicine, Universitas Sumatera Utara.

Forth Author- Ramona Dumasari Lubis, Department of Dermatology and Venereology, Faculty of Medicine, Universitas Sumatera Utara.