

Artikel Penelitian

**CHARACTERISTICS OF UROLOGY PATIENTS TREATED BY STICHTING
SAMENWERKING VLISSINGEN-AMBON (SSVA) IN HAULUSSY HOSPITAL 2017-2018**

Ebram Nainggolan¹, Jacky Tuamelly¹

¹Rumah Sakit Umum Daerah DR. M. Haulussy

Corresponding author e-mail : ebrambram16@gmail.com

Abstract

Introduction. BPH, Urolithiasis and UTI are often urology cases found in Indonesia. There is no epidemiological data about Urology Patients in Maluku Province. Some patients in the province were handled either through referral to other cities or rely on charity program (SSVA) because there was no Urologist available yet in the province. **Aim.** To understand the characteristics of urology patients treated by SSVA in Maluku Province, including age, gender, and diagnosis. **Method.** This descriptive study used retrospective data from the medical records of patients treated by the SVVA in Haulussy Hospital from 2017–2018. **Results.** From a total of 281 (100%) urology patients, there were 173 (61.65%) benign prostatic hyperplasia (BPH) cases, 52 (18.50%) nephrolithiasis cases, 20 (7.11%) urinary tract infection cases, 13 (4.62%) hydrocele cases, 9 (3.2%) vesicolithiasis cases, and 5 (1.77%) varicocele cases. The largest number of BPH patients was from 60-69 years old age group with a total of 71 (41.04%) patients, followed by 70-79 years old age group with a total of 45 (26.01%) patients. From a total of 52 nephrolithiasis patients, there were 28 (53.48%) male patients and 24 (46.15%) female patients, and according to patient age, the largest number was from the 40-59 years old age group with a total of 31 (59.62%) patients, followed by the 60-79 years old age group with a total of 11 (21.16%) patients. **Conclusion.** The largest number of urology patients treated by the SVVA were BPH patients, followed by nephrolithiasis and urinary tract infection patients. The age group that suffered the most from BPH are those aged 60-69 years. In nephrolithiasis patients, it was found that male patients were slightly more prevalent than female. The age group that suffered the most from nephrolithiasis are those aged 40-59 years.

Keywords: Characteristics, urology

Introduction

Urological diseases are diseases that are associated with disorders in the urinary tract system, including the kidneys, bladder, adrenal gland, the urinary tract and also disorders in the male reproductive organs including the penis, testicles, and prostate gland. In the U.S.A, urological diseases are a big burden for the country, in which the most common diagnosis were prostatic diseases including benign prostatic hyperplasia (BPH) or prostatic cancer, followed by urinary tract infection (UTI) and urinary stones/ urolithiasis.¹ According to WHO, prostatic cancer is the second leading cause of cancer death in men.² In Asia, kidney

stones/nephrolithiasis is one of the most common disease, in which approximately 1-19% of the population suffers from nephrolithiasis.³ BPH, nephrolithiasis and UTI are the three most common diseases in Urology.⁴ There is no epidemiological data about Urology Patients in Maluku Province.

Maluku province is an archipelago province in the eastern region of Negara Kesatuan Republik Indonesia (The Unitary State of Republic of Indonesia) with a population of 1.8 million people according to the Maluku central statistical data in 2019.⁵ Urology patients in Maluku province are treated by general surgeons, however if the patient requires treatment by a

urology specialist, they will be referred to another province because there is no urology specialist yet. Other than that, the Ambon city government also hold a humanitarian program called Stichting Samenwerking Vlissingen-Ambon (SSVA) which is a collaboration between the government of Vlissingen city and Ambon city that aim for the social welfare of the underprivileged population in Maluku capital city, Ambon, particularly in the healthcare area.⁶ The visiting SSVA consisted of several urologist, other specialists, nurses, and other health care workers. This study aimed to determine the characteristics of urology patients treated by the SVVA in Maluku province, including age, gender, and diagnosis.

Methods

This descriptive study used retrospective data from the medical records of patients treated by the SVVA in Haulussy Hospital from 2017 – 2018. The data collected includes patient's age, gender, and diagnosis.

Results

The results of this study found that BPH patients were the largest number of patients treated by the SVVA in Haulussy Hospital during the period of 2017 – 2018. According to Table 1, in which from a total of 281 (100%) urology patients, there were 173 (61.65%) BPH patients, 52 (18.50%) Nephrolithiasis patients, 20 (7.11%) UTI, 13 (4.62%) Hydrocele patients, 9 (3.2%) Vesicolithiasis patients, and 5 (1.77%) Varicocele

patients, 3 (1.06%) Hypospadias patients, 2 (0.71%) Vaginal fistula patients, 2 (0.71%) Urethral stricture patients, 1 (0.35%) Epididymitis and 1 penile tumor patients.

Table 1. Distribution of Clinical Diagnosis of Urology Patients

Diagnosis	Frequency	Percentage(%)
BPH	173	61.65
Nephrolithiasis	52	18.50
UTI	20	7.11
Hydrocele	13	4.62
Vesicolithiasis	9	3.20
Varicocele	5	1.77
Hypospadias	3	1.06
Vaginal Fistula	2	0.71
Urethral Stricture	2	0.71
Epididymitis	1	0.35
Penile Tumor	1	0.33
Total	281	100

According to Table 2 on the distribution of BPH patients, it was found that the age group with the largest number of patients were those aged 60-69 years with a total of 71 patients (41.04%), followed by the 70-79-years age group with atotal of 45 patients (26.01%), while the least number was from the 80-89-years age group with a total of 8 patients (4.62%).

Table 2. Age Distribution of BPH Patients

Age group	Frequency	Percentage(%)
40-49	10	5.78
50-59	39	22.54
60-69	71	41.04
70-79	45	26.01
80-89	8	4.62
Total	173	100

Table 3. Gender and Age Distribution of Nephrolithiasis Patients

Characteristics	Frequency	Percentage(%)
Gender		
Male	28	53.48
Female	24	46.15
Age group		
20-39	10	19.22
40-59	31	59.62
60-79	11	21.16

Table 3 presented the characteristics of nephrolithiasis patients according to gender and age. The proportion of male and female patients with a nephrolithiasis diagnosis was only slightly different. From a total of 52 patients with nephrolithiasis, there were 28 (53.48%) male patients and 24 (46.15%) female patients. According to age distribution, the largest number was from the 40-59-years age group with a total of 31 patients (59.62%), followed by the 60-79-years age group with a total of 11 patients (21.16%) and the least was the 20-39-years age group with a total of 10 patients (19.22%).

Discussion

From a total of 281 patients, the largest number of patients treated by SVVA urologist were Benign Prostatic Hyperplasia patients with a total of 173 patients (61.65%). This is in accordance with the study by David C. Miller et al., in the U.S>A, which found an increase of BPH patients from 10.1116 per 100.000 population in 1994 to 14.473 per 100.000 population in 2000.¹ This study was also supported by the literatures which showed that BPH is one of the three most

common diseases in urology other than urinary stones/urethrolithiasis and urinary tract infection.²

The most common age of patients who suffered from BPH was the 60-69-years age group. From a total of 173 BPH patients, there were 71 patients (41.04%) from the 60-69- years age group, followed by the 70-79-years age group with a total of 45 patients (26.01%). This result was in accordance with the study by Filzha, et al., in RSUP (Central General Hospital) Prof. Dr. D. Kandou, Manado in 2017, which found that the most common age group of patients with BPH was the 61-70-years age group with 18 patients (46.15%) from a total of 39 patients, followed by the 71-80-years age group with 10 patients (25.64%).⁷ According to the Indonesian Association of Urologist, BPH occurred in approximately 70% of male above the age of 60 years.⁸ This number will increase up to 90% in male above the age of 80 years. According to literatures, the risk of developing prostatic hyperplasia generally begin at 40 – 79 years old, therefore it is recommended to perform PSA examination to help in determining diagnosis.⁹

In patients with nephrolithiasis, according to gender distribution, there was only a slight difference in proportion between male and female. From a total of 52 patients with nephrolithiasis, there were 28 male patients (53.84%) and 24 female patients (46.16%). The largest number of nephrolithiasis patients was from the 40-59-years age group (59.62%). A study by Endrika, et al., in RSUPN (National

Central General Hospital) Cipto Mangunkusumo in 2015 found that urethrolithiasis was found in 66.3% of male and 53.6% of female patients, while nephrolithiasis was particularly found to be slightly more common in female than in male.¹⁰ According to the same study, regarding the age distribution of nephrolithiasis patients, it was found that it occurred more often in the productive age. It was slightly different with the finding of a study by Zhaoyi, et al., in the U.S.A. in 2018, which found that male above the age of 60 years were more common to have nephrolithiasis, whereas in female it was more common in the 40-59-years age group.¹¹

Conclusion

From the results of this study, it can be concluded that the largest number of urology patients treated by the SVVA were patients with BPH, followed by nephrolithiasis and urinary tract infection patients. The age group that suffered the most from BPH were the 60-69-years age group. In nephrolithiasis patients, it was found that the proportion of male patients were slightly more than female. The age group that suffered the most from nephrolithiasis was the 40-59-years age group.

References

1. Miller, C. David, Chirstoper S.Saigal, Mark S. Litwin. The demographic burden of urology diseases in America. *Urol Clin N Am* 36. 2009: 11-27
2. World Health Organization. Latest global cancer data: Cancer burden rises to 18.1 million new cases and 9.6 million cancer deaths in 2018. 2018:pp 2. Downloaded from: <https://www.who.int/cancer/PRGlobocanFinal.pdf>
3. Liu, yu, Yuntian Chen, Banghua Liao, Deyi Luo, Kunjie Wang, Guohuo Zeng. Epidimiology of urolitiasis in Asia. *Asian J Urol* .2018. 5(4): 205-214
4. Purnomo, Basuki B. 2012. Dasar- dasar Urologi. Edisi kedua. Jakarta: Sagung Seto.
5. Badan Pusat statistic Maluku. Jumlah penduduk Maluku (proyeksi 2019). Downloaded from: <https://maluku.bps.go.id/quickMap.html>
6. Stichting Samenwerking Vlissingen-Ambon. Available from: <https://www.vlissingen-ambon.nl/>
7. Adelia, Filzha, Alwin Monoarfa, Angelica Wagiu. Gambaran Benigna Prostat Hiperplasia di RSUP Prof. Dr. D. Kandou Manado periode Januari 2014- Juli 2017. *Jurnal e-Clinic (ecl)*. 2017. Volume 5, Nomor 2
8. The Indonesian Urological Association .2017. Guidelines for Management of BPH in Indonesia. Downloaded from : <http://www.iaui.or.id/>. pp. 2,13.
9. Kavousi LR, Novick AC, Partin AW, Peters CA. *Campbell-Walsh Urology*. 10th ed. 2012
10. Noviandrini, Endrika, Ponco Birowo, Nur Rasyid. Urinary stone Characteristic of patient treated with extracorporeal shock wave lithotripsy in Cipto Mangunkusumo Hospital Jakarta, 2008-2014: a gender analysis. *Med J Indones*. 2015;24: 234-8
11. Chen, Zhaoyi, Mattia Prospero, Victoria Y Bird. Prevalence of kidney stones in the USA: The National Health and Nutrition Evaluation Survey. *Journal of Clinical Urology*. 2018:1