CHARACTERISTICS OF URETEROVAGINA FISTULA PATIENTS AT HASAN SADIKIN HOSPITAL BANDUNG IN 2017 -2021

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ABSTRACT

Objective: *The study aims to determine the characteristics of ureterovaginal fistula patients at Hasan Sadikin Hospital in Bandung for the 2017-2021 period.* ***Material & Methods:*** *This research was conducted using a descriptive method with a cross-sectional approach. The inclusion criteria in this study were all patients who experienced ureterovaginal fistula and underwent surgery at Hasan Sadikin Hospital. Exclusion criteria in this study were incomplete patient data until the variables studied did not exist.* ***Results:*** *From a total of 35 people who experienced ureterovaginal fistula the most in 2020 were 7 people (23.3%). The mean age was 39.93 ± 11.26 years, the longest distance to surgery was 10.17 ± 9.56 months, and duration of hospitalization 7.31 ± 5.45 days. The highest percentage of age who experienced ureterovaginal fistula was 36-45 years as many as 3 people (30%). Based on the etiology, the most common was supravaginal hysterectomy as many as 5 people (45.5%). The most frequently performed procedure in this study was ureteroneocystostomy with a percentage of 65%.* ***Conclusion:*** *The most common cases of ureterovaginal fistula in 2017 to 2021 were in 2020, the most common age for experiencing ureterovaginal fistula was 36-45 years of age and the most common etiology was supravaginal hysterectomy.*

Keywords: *Ureterovaginal fistula,characteristics, Hasan Sadikin Hospital.*

ABSTRACT

Tujuan: *Penelitian ini bertujuan untuk mengetahui karakteristik pasien fistula ureterovaginal di RS Hasan Sadikin Bandung periode 2017-2021.* ***Bahan & Cara:*** *Penelitian ini dilakukan dengan menggunakan metode deskriptif dengan pendekatan cross-sectional. Kriteria inklusi dalam penelitian ini adalah seluruh pasien yang mengalami fistula ureterovaginal dan menjalani operasi di RS Hasan Sadikin.Kriteria eksklusi pada penelitian ini adalah data pasien tidak lengkap hingga variabel yang diteliti tidak ada.* ***Hasil:*** *Dari total 35 orang yang mengalami fistula ureterovaginal terbanyak pada tahun 2020 sebanyak 7 orang (23,3%). Rerata usia 39,93 ± 11,26 tahun, jarak terjauh operasi 10,17 ± 9,56 bulan, dan lama rawat inap 7,31 ± 5,45 hari. Persentase usia tertinggi yang mengalami fistula ureterovaginal adalah 36-45 tahun sebanyak 3 orang (30%). Berdasarkan etiologi yang terbanyak adalah histerektomi supravaginal sebanyak 5 orang (45,5%). Prosedur yang paling sering dilakukan pada penelitian ini adalah ureteroneocystostomy dengan persentase 65%.* ***Simpulan:*** *Kasus fistula ureterovaginal terbanyak pada tahun 2017 hingga 2021 adalah pada tahun 2020, usia terbanyak mengalami fistula ureterovaginal adalah 36-45 tahun dan etiologi tersering adalah histerektomi supravaginal.*

Kata kunci: *Fistula ureterovaginal, karakteristik, RS Hasan Sadikin.*

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INTRODUCTION

A ureterovaginal fistula is a condition where a channel forms between the distal ureter and the vagina. It usually occurs as a result of complications of pelvic area surgery such as obstetrics, gynecology, colorectal and vascular surgery. The most common symptom in this case is urinary incontinence which appears 1 to 4 weeks after surgery.[1-2]

In both developed and developing countries, gynecological surgery is the most common cause of ureterovaginal fistula. In Indonesia, it was reported that out of 11 patients who underwent hysterectomy, 36.4% of ureterovaginal fistula cases occurred, which is the second largest after vesicovaginal fistula cases (59.1%).[2-3]

The case of ureterovaginal fistula is a case that has a high morbidity rate. Fistulas that are not handled properly will cause physical, health, and social problems, including economic problems because they are associated with increased length of hospital stay or repeated surgeries. Complications

that can occur include perineal nerve damage, sepsis, and kidney damage.

Fistula cases can be prevented and managed if treated quickly and there is access to surgical services. Although surgery is the main choice in fistula treatment, with a successful closure rate of 88%, the success of this surgery is strongly influenced by the type of fistula, operator experience, surgical route, post-operative management, and the type of anesthesia used.[2-3]

Based on this background, namely the high morbidity of ureterovaginal fistula patients which will have an impact on the patient's quality of life later, the researchers are interested in conducting research on the characteristics of ureterovaginal fistula patients at RSHS Bandung.

OBJECTIVE

This study aims to determine the characteristics of patients with ureterovaginal fistula at Hasan Sadikin Hospital in Bandung for the 2017-2021 period.

MATERIAL&METHODS

This study was a cross-sectional study to determine the characteristics of ureterovaginal fistula patients at Hasan Sadikin Hospital in Bandung for the 2017-2021 period. Several variables were assessed in the form of patient's age, distance from diagnosis to treatment, duration of hospitalization, and etiology.

This research was conducted by the Department of Urology, Faculty of Medicine, Padjadjaran University, Hasan Sadikin Hospital, Bandung. The data from this study were obtained from the results of the patient's medical records. Samples were taken by total sampling. All subjects who meet the inclusion criteria and are not included in the exclusion study will be included in the study sample. The exclusion criteria in this study were incomplete medical records.

The research data was taken from medical records from the Department of Urology, Faculty of Medicine, Padjadjaran University, Hasan Sadikin Hospital, Bandung. Data taken from medical records in the form of patient age, distance from diagnosis to action, duration of hospitalization and etiology. The collected data was then analyzed descriptively using SPSS 25.0 software. data is presented in the form of frequency and percentage to provide an overview of each research variable being assessed.

RESULTS

In this study, data were obtained from 35 patients. Each of the 5 patients in 2017, 6 patients in 2018, 6 patients in 2019, 7 patients in 2020, 6 patients in 2021. After that, data were taken based on the patient's age, distance from diagnosis to action, duration of stay, and etiology.

In Table 4.1, the number of ureterovaginal fistula patients by year is described. Almost similar results were obtained in the year but the highest frequency was found in 2020 as many as 7 patients.

In table 4.2, the number of ureterovaginal fistulas by age category shows the highest frequency of ureterovaginal cases at the age of 36-45 years in 20219 and 2021.

Table 4.3 describes the etiological frequency of ureterovaginal fistulas. In this study, the most common etiology for ureterovaginal cases at RSHS was supravaginal hysterectomy in 11 cases.

Table 4.4 describes the age of the patient, the distance to the procedure and the duration of hospitalization. The mean age of the patients was 39.93 ± 11.26 years, with a median of 41 years and the youngest age being 20 years and the oldest being 63 years. The distance to the action obtained an average of 10.17 ± 9.56 years, with a median of 6 months and the fastest distance of 1 month. Based on the duration of hospitalization, the average was 7.31 ± 5.45 days with a median of 6 days and the fastest duration of hospitalization was 2 days and the longest duration was 29 days.

Table 4.5 describes the procedures performed on patients with ureterovaginal fistula. In this study, the most commonly performed procedure was ureteroneocystostomy with a percentage of 65%.

Table 4.1 Ureterovaginal Fistulas by Year.

	2017		2018		2019		2020		2021	
	n	%	n	%	N	%	n	%	n	%
Total	5	16.66	6	20	6	20	7	23.33	6	20

Table 4.2 Ureterovaginal Fistulas by Age.

Age	2017		2018		2019		2020		2021		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
<26years old	1	20	2	40	0	0	2	40	0	0	5	100
26-35years old	1	25	1	25	0	0	1	25	1	25	4	100
36-45years old	1	10	2	20	3	30	1	10	3	30	10	100
46-55years old	2	25	1	12.5	1	12.5	2	25	2	25	8	100
56-65years old	0	0	0	0	1	50	1	50	0	0	2	100

Table 4.3 Etiology of Ureterovaginal Fistulas

Etiology	2017		2018		2019		2020		2021		Total	
	n	%	n	%	N	%	n	%	n	%	n	%
Histerek-Salpingo Oovorektomi Bilateral	2	22.2	2	22.2	2	22.2	2	22.2	1	11.1	9	100
Histerektomi supravaginalis	0	0	1	9.1	2	18.2	3	27.3	5	45.5	11	100
Sectio Caesaria	3	42.9	2	28.6	1	14.3	1	14.3	0	0	7	100
Partus pervaginam	0	0	1	50	0	0	1	50	0	0	2	100

Table 4.4 Ureterovaginal Fistulas Characteristic

Variable	Mean ± SD	Median	Min	max
Age (years old)	39.93 ± 11.26	41	20	63
Distance from diagnosis to action (months)	10.17± 9.56	6	1	36
Treatment time (days)	7.31±5.45	6	2	29

Table 4.5 Ureterovaginal Fistulas Action.

Etiology	2017		2018		2019		2020		2021		Total	
	n	%	n	%	N	%	n	%	n	%	n	%
Ureteroneocystostomy	3	15.7	4	21	3	15.7	4	21	5	26.3	19	100
Ureter reimplantation	2	20	1	10	3	30	2	20	2	20	10	100

DISCUSSION

This research is a descriptive cross-sectional study conducted at Hasan Sadikin Hospital, Bandung. There were 35 patients who met the inclusion criteria

The age of ureterovaginal patients at Hasan Sadikin Hospital in 2017-2021 is very diverse. The youngest patient was 20 years old and the most was in the 36-45 year age range. In a study conducted by Brandon in 2019, the mean age of patients with ureterovaginal fistula was 43 years. This is presumably because at this age pregnancy complications in women tend to be higher so that it has an influence on the frequency of operations on the pelvis. In addition to pregnancy complications, comorbid diseases in women aged 36-45 years are also higher than those at younger ages.

In this study, it was found that the most common etiology of this fistula was supravaginal hysterectomy, this result is in accordance with a study conducted by Badar and Al Otaibi in 2012. In gynecological surgery, the ureter is prone to injury because of its anatomical location close to the pelvis. The incidence of ureteral injury in gynecological surgery is estimated to be 0.04% for abdominal hysterectomy, 0.02% for vaginal hysterectomy, and 0.8–4.3% for laparoscopic hysterectomy. ureterovaginal from abdominal hysterectomy 47%, laparoscopic hysterectomy 27%, vaginal hysterectomy 11%, and cesarean section 5%. Ureterovaginal fistula occurs 1-4 weeks after

surgery/injury to the ureter resulting in a stricture followed by partial or total obstruction of the lumen.[10]

Cases of ureterovaginal fistula in postoperative (iatrogenic) cases usually occur due to laceration, transection, avulsion, and ligation. surgery (partial/complete) or ischemia due to devitalization of the ureteral vessels. In obstetrical or gynecological cases, pelvic adhesions due to hysterectomy and cesarean section can occur because of the enlarged uterus and also bleeding that appears and interferes with the operator's field of view, especially in the lower 1/3. Ureteral trauma occurs because of efforts to control bleeding or because of the process of tissue clamping. The sites most susceptible to trauma are the lower 1/3 including the lateral ends of the uterosacral ligaments, the ventral uterine arteries, and the urinoma formation.

The distance to the procedure in cases of ureterovaginal fistula at Hasan Sadikin Hospital in 2017-2021 obtained an average of 10.17 ± 9.56 months with the longest distance of 36 months. In contrast to a study conducted by Choudhuryl in 2017 it was found that the average distance to action was 46 days with a range of 21-82 days. Some experts suggest that repair should be done within 7-10 days after the procedure. However, if a new fistula is diagnosed after this time limit, the repeat procedure will be postponed for up to 6 weeks until the epithelium of the vagina and urothelium looks good, while at Hasan Sadikin Hospital the procedure is carried out after 3 months. One of the factors that affect the distance of action is the level of patient compliance which is different in each population.[11-12]

The most commonly performed procedure at RSHS is ureteroneocystotomy with a percentage of 65% this is because one indication for this procedure is trauma that occurs in the lower 1/3 of the ureter and most cases of ureterovaginal fistula occur due to trauma to the lower 1/3 of the ureter.

The drawback of this research is the descriptive nature of the research so that it cannot directly assess the relationship between variables.

CONCLUSION

The most common cases of ureterovaginal fistula in 2017 to 2021 were in 2020, the most common age for experiencing ureterovaginal fistula was 36-45 years of age and the most common etiology was supravaginal hysterectomy. This data can be used as a consideration for screening risk factors.

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