

Prevalence and Characteristic of Urogenitalia Cases at Obstetry and Gynecology Departement of Hasanuddin University from Multiple Center in Makassar during 2019 to 2022

Imam Ahmadi Farid

Division of Urogynecology and Reconstructive Pelvic Surgery, Department of Obstetrics and Gynecology, Faculty of Medicine, Hasanuddin University, Makassar, Indonesia

ABSTRACT

Urogenitalia in woman prevalence in Indonesia is poorly reported and published. Information regarding this distribution of urogenitalia cases in woman may be beneficial to improve our management strategies and help the government to develop better healthcare policy in the city. We collected medical records from multiple hospital in Makassar from 2019 to 2020 that diagnosed with urogenitalia diseases. We found 472 patients that diagnosed from Urogenitalia diseases from 2019 to 2020. Pelvic organ prolapse is the most frequent case accounted for 59.5% of study population followed by rupture of perineum and urinary tract fistula, 10.8% and 7.4% respectively. Others case were accounted below 3% with 19 total diagnosis.

Conclusions: Both medical and paramedical staff can use the QUID questionnaire and recommend it for wider usage, particularly in primary care or level I health institutions for screening, as this treatment can still be started in early.

KEYWORDS: urogenitalia, prolapse, fistula, urogynecology

ARTICLE DETAILS

Published On:
09 December 2022

Available on:
<https://ijmscr.org/>

INTRODUCTION

Based on its function, Urogenitalia system composed by urinary system and genitalia system. Although functionally differs, these two systems is closely related embryologically and anatomically. Urogenital system is responsible in producing, storing and excreting urine, and also in reproduction activity.^{1,2}

Woman health is concerned as a top priority in the world. Woman health plays in important role in humanity's survival. Although all organ in humans are important, but reproduction and genital organ should be a top concern. About 92% woman in the world is predicted to have reproduction and genitalia health issue in their life. The associated pathologies are vary, ranging from vascular, infection, metabolic, iatrogenic, neoplastic, congenital to degenerative disease.³⁻⁵

Information regarding prevalence will be greatly beneficial to improve our alertness in preventive, diagnosis and management. Furthermore, our current knowledge in woman urogenitalia system is hopefully could serve as a

cornerstone for a better health policy and strategy for dealing woman health issue. Therefore, this study aims to investigate prevalence and characteristic from urogenitalia case in hospitals at Makassar

METHODS

This study is a descriptive study which use retrospective cross-analytic design. The data is collected from patient's medical record from multiple hospitals in Makassar. The collection periods is from 2019 to 2022. The data is analyzed using SPSS ver. 26 and Microsoft excel.

RESULTS

In this study, we screened and collected 472-woman medical records with urogenitalia case from multiple hospitals at Makassar during 2019-2022. Demographic characteristic of the data is presented in Table 1. On age category, 67.1% case are on >50 years old category and 38.3% were in <50 years old category. Mostly cases were occurred in Grestelina Hospital (54.2%), followed by Sitti Khadija 1 hospital (19.9%), Wahidin Sudirohusodo hospital (12.5%), and other

Prevalence and Characteristic of Urogenitalia Cases at Obstetry and Gynecology Departement of Hasanuddin University from Multiple Center in Makassar during 2019 to 2022

hospital (13.3%). Multipara is the most reported case of which the urogenitalia case occurs (47.7%), and 29.0% is on grande multipara, 12.1% is primipara, and 11.2% is nullipara. High school (Sekolah Menengah Atas (SMA)) is the most last

education of the population study (36.9%) with no school is the least (1.7%). The majority of the population is household wife which accounted 79.9% of the sample, and worker and students/unemployment are 13.8 % and 6.4%, respectively.

Table 1. Patients’ demographic and characteristic with urogenitalia case at multiple hospital in Makassar from 2019-2022.

Age	Number of cases (n)	Percentage (%)
≤50 years old	181	38.3
>50 years old	291	61.7
Case distribution on each hospital		
Wahidin Sudirohusodo Hospital	59	12.5
Grestelina Hospital	256	54.2
Sitti Khadijah I hospital	94	19.9
Other hospitals	63	13.3
Parity		
Nullipara	53	11.2
Primipara	57	12.1
Multipara	225	47.7
Grande Multipara	137	29.0
Latest Education		
No formal school	8	1.7
Elemntary school	106	22.5
Junior High School	82	17.4
Senior High School	174	36.9
University	102	21.6
Working status		
Household wife	377	79.9
Student/unemployed	30	6.4
Working (formal and informal)	65	13.8
Total	472	

*others hospitals are accounted for Prof Farid Hospital, Kartini Hospital, Fatimah Hospital, Hasanuddin University Hospital, Pertiwi Hospital, Ibnu Sina Hospital, Jala Ammari Hospital, Amanat Hospital, Aura Ibu Hospital, Stella Maris Hospital, Awal Bros Hospital, Siloam Hospital.

Table 2 describes type of Urogenitalia diagnosis for the patients on the population sample. This table shows a range

of urogenitalia disease but with quite low number of cases. Most case for diagnosis is accounted for pelvic organ prolapse (59.5%), perineum rupture (10.8%), ruptur of urogenitalia tract (7.4%), pelvic organ prolapse with urinary tract stones (1.9%), congenital anomaly of hymen (1.5%), and trauma of urogenitalia system (1.5%).

Table 2. Distribution of urogenitalia diagnosis of the multiple hospital in Makassar during 2019-2022 period.

Diagnosis	Number of cases (n)	Percentage (%)
Pelvic organ prolapse	281	59.5
Rupture of perineum	52	10.8
Urogenitalia tract fistula	35	7.4
Uterine myom	4	0.8
Congenital anomaly of hymen	7	1.5
Trauma of urogenitalia system	7	1.5
Vagina septum	4	0.8
Mullerian agenesis	13	2.8
Incompetence of cervix		0.8
Skene cyst	4	0.8
Gartner cyst	1	0.2
Elongation of cervix	5	1.1

Prevalence and Characteristic of Urogenitalia Cases at Obstetry and Gynecology Departement of Hasanuddin University from Multiple Center in Makassar during 2019 to 2022

Herlyn-Werner-wunderliich syndrom	2	0.4
Stenosis of servical canal	2	0.4
Vaginal sinecchia	3	0.6
Urine retention	2	0.4
Urethral polyp	1	0.2
colporrhexis	1	0.2
Phymosis of fallopian tube	2	0.4
Pelvic organ prolapse + perineal rupture	1	0.2
Pelvic organ prolapse + urinary tract stones	9	1.9
Pelvic organ prolapse + ovary cyst	3	0.6
Pelvic organ prolapse + stress type urine incontinentia	2	0.4
Pelvic organ prolapse + elongation of cervix	3	0.6
Pelvic organ prolapse + Uterine myom	2	0.4
Pelvic organ prolapse + adnexa tumor	1	0.2
Pelvical organ prolapse + cervix cancer	1	0.2
Urogenitalia tract fistula + perineal rupture	2	0.4
Urogenitalia tract fistula + uterine myom	1	0.2
Urogenitalia tract fistula + urinary tract stones	1	0.2
Urogenitalia tract fistula + adenomiosis	1	0.2
Urogenitalia tract fistula + bladder cancer	1	0.2
Trauma of urogenitalia system + ovary cyst	2	0.4
Trauma of urogenitalia system + uterine myom	1	0.2
Trauma of urogenitalia system + ovary cancer	1	0.2
Vaginal septum + uterine didelfis	2	0.4
Vaginal septum + ovary cyst	1	0.2
Ovary cyst + fallopian tube rupture	1	0.2
Skene cyst + gartner cyst	1	0.2
Ovary cyst + uterine hypoplasia	1	0.2
Stricture of vagina + labium sinecchia + agenesis of urethra	1	0.2
Uterine didelfi + phymosis of fallopian tube + stenosis of cervix canal	1	0.2
Ovary cyst + mulleria agenesis + hypoplasia of uterus	1	0.2
Ovary cyst + uterine myom + pelvical organ prolapse	1	0.2
Mulleria agenesis + uterine didlefi + uterine myom + trauma of urogenitalia system	1	0.2
total	472	

Table 3 shows urogenitalia cases distribution based on subject's age. For some cases with the frequency above 1%, there is differences of the ages distribution. pelvical organ prolapse and pelvical organ prolapse + urinary tract stones are more frequent on age group above 50 years old. For other

disease such as perineal rupture, urogenitalia tract fistula, Mullerian agenesis, congenital anomaly of hymen, ad urotrauma, the cases are more frequent on group age below 50 years old.

Table 3. Urogenitalia case distribution based on age group category.

Diagnosis	Age categories		Total cases
	≤50 years old	>50 years old	
Pelvic organ prolapse	23	258	281
Rupture of perineum	49	2	51
Urogenitalia tract fistula	32	3	35
Uterine myom	3	1	4
Congenital anomaly of hymen	7	0	7
Trauma of urogenitalia system	7	0	7
Vagina septum	3	1	4

Prevalence and Characteristic of Urogenitalia Cases at Obstetry and Gynecology Departement of Hasanuddin University from Multiple Center in Makassar during 2019 to 2022

Mullerian agenesis	13	0	13
Incompetence of cervix	4	0	4
Skene cyst	4	0	4
Gartner cyst	1	0	1
Elongation of cervix	1	4	5
Herlyn-Werner-wunderliich syndrom	1	1	2
Stenosis of servical canal	2	0	2
Vaginal sinecchia	3	0	3
Urine retention	2	0	2
Urethral polyp	1	0	1
colporrhexis	1	0	1
Phymosis of fallopian tube	2	0	2
Pelvic organ prolapse + perineal rupture	0	1	1
Pelvic organ prolapse + urinary tract stones	0	9	9
Pelvic organ prolapse + ovary cyst	0	3	3
Pelvic organ prolapse + stress type urine incontinencia	0	2	2
Pelvic organ prolapse + elongation of cervix	1	2	3
Pelvic organ prolapse + Uterine myom	2	0	2
Pelvic organ prolapse + adnexa tumor	0	1	1
Pelvic organ prolapse + cervix cancer	0	1	1
Urogenitalia tract fistula + perineal rupture	2	0	2
Urogenitalia tract fistula + uterine myom	1	0	1
Urogenitalia tract fistula + urinary tract stones	1	0	1
Urogenitalia tract fistula + adenomiosis	1	0	1
Urogenitalia tract fistula + bladder cancer	0	1	1
Trauma of urogenitalia system + ovary cyst	2	0	2
Trauma of urogenitalia system + uterine myom	1	0	1
Trauma of urogenitalia system + ovary cancer	1	0	1
Vaginal septum + uterine didelfis	2	0	2
Vaginal septum + ovary cyst	1	0	1
Ovary cyst + fallopian tube rupture	1	0	1
Skene cyst + gartner cyst	1	0	1
Ovary cyst + uterine hypoplasia	1	0	1
Stricture of vagina + labium sinecchia + agenesis of urethra	1	0	1
Uterine didelfi + phymosis of fallopian tube + stenosis of cervix canal	1	0	1
Ovary cyst + mulleria agenesis + hypoplasia of uterus	1	0	1
Ovary cyst + uterine myom + pelvical organ prolapse	0	1	1
Mulleria agenesis + uterine didlefi + uterine myom + trauma of urogenitalia system	1	0	1
total	181	291	472

Table 4 shows urogenitalia cases distribution based of number of parity. Pelvical organ prolapses mostly occurred on multiparity and grande multiparity. Perineal ruptur more frequent on mother on their first pregnancy/delivery. Fistula

and trauma of urigenitalia tract mostly happened on multiparity mother. Mulleria agenesis and congenital anomaly oh hymen in only occurred on woman who have not pregnant yet.

Prevalence and Characteristic of Urogenitalia Cases at Obstetry and Gynecology Departement of Hasanuddin University from Multiple Center in Makassar during 2019 to 2022

Table 4. Urogenitalia case distribution based on the parity.

Diagnosis	Paritas				Total
	Nullipara	Primipara	Multipara	Grande multipara	
Pelvic organ prolapse	2	7	155	117	281
Rupture of perineum	3	26	19	3	51
Urogenitalia tract fistula	2	10	22	1	35
Uterine myom	2	1	1	0	4
Congenital anomaly of hymen	7	0	0	0	7
Trauma of urogenitalia system	0	1	6	0	7
Vagina septum	4	0	0	0	4
Mullerian agenesis	13	0	0	0	13
Incompetence of cervix	1	2	1	0	4
Skene cyst	1	2	1	0	4
Gartner cyst	0	0	1	0	1
Elongation of cervix	0	0	2	3	5
Herlyn-Werner-wunderlich syndrom	2	0	0	0	2
Stenosis of servical canal	1	1	0	0	2
Vaginal sinecchia	1	2	0	0	3
Urine retention	2	0	0	0	2
Urethral polyp	1	0	0	0	1
colporrhexis	0	1	0	0	1
Phymosis of fallopian tube	1	0	1	0	2
Pelvic organ prolapse + perineal rupture	0	0	1	0	1
Pelvic organ prolapse + urinary tract stones	0	1	2	6	9
Pelvic organ prolapse + ovary cyst	0	0	2	1	3
Pelvic organ prolapse + stress type urine incontinentia	0	0	1	1	2
Pelvic organ prolapse + elongation of cervix	0	0	1	2	3
Pelvic organ prolapse + Uterine myom	0	0	1	1	2
Pelvic organ prolapse + adnexa tumor	0	0	1	0	1
Pelvic organ prolapse + cervix cancer	0	0	1	0	1
Urogenitalia tract fistula + perineal rupture	0	0	1	1	2
Urogenitalia tract fistula + uterine myom	0	0	1	0	1
Urogenitalia tract fistula + urinary tract stones	0	0	1	0	1
Urogenitalia tract fistula + adenomiosis	0	1	0	0	1
Urogenitalia tract fistula + bladder cancer	0	0	1	0	1
Trauma of urogenitalia system + ovary cyst	2	0	0	0	2
Trauma of urogenitalia system + uterine myom	0	1	0	0	1
Trauma of urogenitalia system + ovary cancer	0	0	1	0	1
Vaginal septum + uterine didelfis	2	0	0	0	2
Vaginal septum + ovary cyst	1	0	0	0	1

Prevalence and Characteristic of Urogenitalia Cases at Obstetry and Gynecology Departement of Hasanuddin University from Multiple Center in Makassar during 2019 to 2022

Ovary cyst + fallopian tube rupture	1	0	0	0	1
Skene cyst + gartner cyst	0	0	1	0	1
Ovary cyst + uterine hypoplasia	1	0	0	0	1
Stricture of vagina + labium sinecchia + agenesis of urethra	1	0	0	0	1
Uterine didelphi + phymosis of fallopian tube + stenosis of cervix canal	0	1	0	0	1
Ovary cyst + mulleria agenesis + hypoplasia of uterus	1	0	0	0	1
Ovary cyst + uterine myom + pelvical organ prolapse	0	0	0	1	1
Mulleria agenesis + uterine didlefi + uterine myom + trauma of urogenitalia system	1	0	0	0	1
Total	53	57	225	137	472

DISCUSSION

This collected data could gives us insight about woman urogenitalia case distribution in some healthcare center in Makassar. In Makassar, the woman urogenitalia case that most frequent are pelvical organ prolapse followed by pelvical organ prolapse + urinary tract stones, perineal rupture, urogenitalia tract fistula, Mulleria agenesis, congenital anomaly of hymen, dan trauma, whereas the other cases are quite rare accounted below 1% of study population. Although some rare cases are occurred simultaneously with other diseases, we could not yet conclude that cases have significant relations or not. Further investigation are required.

Pelvical organ prolapse, the most frequent case, is accounted for more than half of study population for 59.5%, even we disregard the case that co-occurred with this disease. From our data, most cases are occurred on age category over 50 years old (91.8%). This data consistent with some other studies that reveals age is one of important risk factor in pelvical organ prolapse, which this could be stand as strong independent risk factor. These studies also support our data that parity is one of contributing factor for pelvical organ prolapse. Aging is unavoidable process which marked with decreasing physiological integration of the body which eventually leading to decreasing of all organ function. This function atenuation can be simple correlated to pelvical organ prolapse. Aging caused decreased of human total collagen with hormone that resulted in miogenic changes of the pelvic muscle and related connective tissue. This changes ultimately loosen the supporting function of pelvical organ that resulted in prolapsing. Furthermore, we could also notice an abnormal collagen metabolism on woman vagina with pelvical organ prolapse.^{6,7}

Parity is one of the most associated risk factor for pelvical organ prolapse. From our data, 55.1% cases were occurred with multiparity mother and 41.6% on grande multiparity mother. As we know, pregnancy affects position, size, and structure of supportive organ in pelvic. Moreover, high parity number is highly associated with reptitive

mechanical stress that affects extracellular matrices metabolism of pelvic muscle. However this only prominence on vaginal delivery and not on Caesarean delivvery. During vaginal delivery, contraction of uterus and passing of baby head through vaginal introitus also affects structure of supportive muscles in pelvic. Although rare, pelvical organ prolapse can also occurs on woman who have not pregnant yet, accounted for 0.7%. This phenomenon could be caused by abnormality of connective tissue, injury of medulla spinalis, severy cosntipation, or excessive physical activity.^{6,8}

Although some pelvical organ prolapse cases are co-occurred with urinary tract stones, there are not direct relationship are reported on most studies. Interestingly, we have reported one case of pelvical organ prolapse that can not be reduced because of blocking of stone on bladder. This case should be deeply investigated further.⁹

Perinal rupture accounted for 10.8% case, which on most cases, occurred on age category below 50 years old. This is natural event for delevring mothers, which are in this age category. Perinal rupture also reported as the second most cause of post partum haemorrhage that caused atonia of uterus. Rupture of perineum is frequently occurred on woman abobe 35 years old. When linked with parity, primipara mothers tend to have perinal rupture. However, some reports suggested that there are other factors that could play a role on perinela rupture such as elasticity of the perineum that are different on each woman. Our data suggests that perineal rupture is mostly frequent on primipara (50.9%) and multipara (37.25).¹⁰

Fistula of urigenitalia tracts is accounted for 7.4% cases. This case was mostly happened on mother with multiparity and age below 50 years. From age viwepoint, urogenitalia fistula mostly occurs on reproductive age (15-49 years old). This also supported by high parity status. Furthermore, the other important factors are inadequate antenatal care, long labour, and indecisive patients.¹¹

Prevalence and Characteristic of Urogenitalia Cases at Obstetry and Gynecology Departement of Hasanuddin University from Multiple Center in Makassar during 2019 to 2022

Mullerian agenesis (2.8%) and congenital anomaly of hymen (1.5%) are congenital cases, therefore these diseases may be identified on earlier life period and also with patient with nulliparity status. Urotrauma accounted for 1.5% study population, with all of the cases falls under 50 years patient category. Urotrauma also associated with another type of cancer and may also be iatrogenic.

The limitation of the study is that all of the cases only reported from hospitals in Makassar which cases are from primary health care such as community health center (puskesmas) are highly likely not accounted. These cases may be resolved in this level of health care such as perineal rupture type 1 & 2

CONCLUSION

During 2019 to 2022 period, we founded 472-woman urogenitalia cases with pelvic organ prolapse being the most cases reported. Age group for each disease for woman urogenitalia cases are considerably vary. Parity of the subject are quite different for each disease since every case has its own risk factors.

ACKNOWLEDGMENTS

No acknowledgments needed in this article

REFERENCES

- I. Azwan RJ, Utama BI, Yusrawati Y. Urogenital System for Women. *Journal of Midwifery*. 2021;6(1):119. doi:10.25077/jom.6.1.119-131.2021
- II. de Groat WC. Autonomic Nervous System: Urogenital Control. In: Reference Module in Neuroscience and Biobehavioral Psychology. Elsevier; 2017. doi:10.1016/B978-0-12-809324-5.01822-8
- III. Ribeiro PS, Jacobsen KH, Mathers CD, Garcia-Moreno C. Priorities for women's health from the Global Burden of Disease study. *International Journal of Gynecology & Obstetrics*. 2008;102(1):82-90. doi: 10.1016/j.ijgo.2008.01.025
- IV. Nora H, Khalishah G. Gambaran Jenis Penyakit Ginekologi di Rumah Sakit Umum Daerah Dr. Zainoel Abidin Banda Aceh Tahun 2017. *Jurnal Kedokteran Nanggroe Medika*. 2018;1(4).
- V. Chai J, Evans L, Hughes T. Diagnostic aids: the Surgical Sieve revisited. *The Clinical Teacher*. 2017;14(4):263-267. doi:10.1111/tct.12546
- VI. Brito LGO, Pereira GMV, Moalli P, et al. Age and/or postmenopausal status as risk factors for pelvic organ prolapse development: systematic review with meta-analysis. *International Urogynecology Journal*. 2022;33(1):15-29. doi:10.1007/s00192-021-04953-1
- VII. Farid IA, Hatta M, Rauf S, Abdullah N. Relationship Between Age, Parity, and History of Chronic Cough as a Risk Factor for Uterine Prolapse Based on Expression of mRNA and Soluble Protein Oestrogen Receptor Alpha (ER α) and Oestrogen Receptor Beta (ER β). *Gazzetta Medica Italiana*. Published online July 9, 2019.
- VIII. Farid IA. Expression of MRNA and Soluble Protein Estrogen Receptor Alpha (ER α) and Estrogen Receptor Beta (ER β) as the Risk Factor of Pelvic Organ Prolapse Grade III-IV. Hasanuddin University; 2019.
- IX. Thompson CD, Henderson BE, Stanley R. Bladder calculi causing irreducible urogenital prolapse. *BMJ Case Reports*. Published online September 12, 2018:bcr-2018-225695. doi:10.1136/bcr-2018-225695
- X. Hastuti TA, Mudigdo A, Budihastuti UR. Age, Parity, Physical Activity, Birth Weight, and the Risk of Perineum Rupture at PKU Hospital in Delanggu, Klaten, Central Java. *Journal of Maternal and Child Health*. 2016;01(02):93-100. doi:10.26911/thejmch.2016.01.02.04
- XI. Swain D, Parida SP, Jena SK, Das M, Das H. Prevalence and risk factors of obstetric fistula: implementation of a need-based preventive action plan in a South-eastern rural community of India. *BMC Women's Health*. 2020;20(1):40. doi:10.1186/s12905-020-0090