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Case Report

Vault prolapse cases in Dr. Soetomo general hospital Surabaya

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ABSTRACT

Background: Vault prolapse is often occurred after hysterectomy procedure, and sometimes need a surgical repair.
Objective: Study aimed to investigate the case of vault prolapse in which repeated operative procedures were performed at our teaching hospital, Dr. Soetomo General Hospital.
Materials and Methods: The data in this case report were obtained through medical records and register books form Urogynecology Division of Obstetrics and Gynecology during 2015-2019. We analyse the characteristics of postoperative vault prolapse from patients after transabdominal hysterectomy and transvaginal hysterectomy procedure.
Result: In 2015-2019 there were 16 patients diagnosed with vault prolapse with a preoperative diagnosis of uterine prolapse (16 cases). Of the 16 cases of vault prolapse, 10 cases (62.50%) were post transabdominal hysterectomy procedure, and 6 cases (37.5%) were post transvaginal hysterectomy procedure.
From a total of 16 cases of vault prolapse that were reoperated with various procedures. The surgery success rate was 87.5%.
Conclusion: Various corrective procedures were performed again by the urogynecology division of Obstetrics and Gynecology. Dr. Soetomo General Hospital with good result.

1. Introduction

Based on epidemiology data, vault prolapse is often occurred after hysterectomy procedure, and sometimes need a surgical repair. The prevalence of post-hysterectomy vault prolapse ranges from 0.2 to 43%. [1]

However, not all women with vault prolapse require surgery. A large-scale study in Austria reported that out of 7,645 hysterectomy procedures, 577 cases of vault prolapse were found, those who were estimated to require surgical repair were 6-8%. [2]

2. Materials and Methods

The data in this case report were obtained through medical records and register books from Urogynecology Division of Obstetrics and Gynecology Department, Soetomo General Hospital during 2015-2019. From these data, an assessment of patient characteristics, factors that were associated with the incidence of vault prolapse, and an overview of the operating modalities for vault prolapse repair performed at our teaching hospital, Dr. Soetomo General Hospital were carried out.

3. Results and Discussion

3.1. Characteristics of vault prolapse patients at RSUD Dr. Soetomo in 2015-2019

Most of the patients who come to the urogynecology clinic and are diagnosed with vaginal stomp prolapse or cervical stomp prolapse or vault prolapse are patients from another hospital.

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Table 1: Patient data with vault prolapse at Dr. Soetomo General Hospital

No.	Case	(Complain)	(Physical examination)	Assessment	Procedures
1.	Mrs. ALM 52 y.o Parity 2102 Youngest child: 22 y.o	Lump from the vagina	Inspekulo (Gynecologic Examination): A slippery portio, good stomp suture, mass came out from anterior vaginal wall	Cervical stomp prolapse + Grade III Cystocele + Post SVH for uterine prolapse + Euthyroid phase hyperthyroidism	Transvaginal Trachelectomy + anterior and posterior colporrhaphy
		Operation History: Post SVH for uterine prolapse indication in 3 years previously	Vaginal toucher Mass came out from anterior vagina which was 4x4 cm, closed - smooth portio		
	Married 1x à 38 years Contraception history: 3 months injection Sexual activity: active		Aa +3 Ba +2 C +3 GH 4 Pb 3 TVL 6 AP -3 Bp -3 D -3		
2	Mrs. HAS 58 y.o Parity 7005 Youngest child: 14 years	Lump from the vagina	Inspekulo (Gynecologic Examination): mass came out from posterior vaginal wall + vaginal stomp, good stomp suture	Grade III vaginal stomp prolapse + Post TAH-BSO for vaginal grade IV uterine prolaps + Grade III rectocele + Grade I cystocele + Nonsexual active	Colpocleisis
		Operation History: Post TAH BSO for grade IV uterine prolapse in 1 year previously	Vaginal toucher:		
	Married 1x: 32 years		Mass came out from the vagina – which was about 5x5 cm		
	Contraception history: -		POP Q: Aa -1 Ba -2 C +5 GH 4 Pb 3 TVL 8		
	Sexual activity: not active		AP +2 Bp +3 D -		

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Table 1 continued

3	Mrs. HAR 50 y.o Parity 2002 Youngest child: 20 y.o	Lump from the vagina	Inspekulo (Gynecologic Examination): Mass came out from the vagina, good stomp suture	Grade III vaginal stomp prolapse + Post TAH-BSO for uterine prolapse + grade III cystocele + grade III rectocele	Sacrospinous fixation + anterior and posterior colporrhaphy
		Operation History: Post TAH-BSO for uterine prolapse in 1 year previously	Vaginal toucher: Mass came out from the vaginal stomp, anterior + posterior wall of the vagina		
	Married 1x à 25 years Contraception history: 3 months injection Sexual activity: active		POP Q: Aa +3 Ba +3 C + 3 GH 4 Pb 3 TVL 6 AP +3 Bp +3 D -		
4	Mrs. NAI 53 y.o Parity 6006 Youngest child: 14 y.o	Lump from the vagina	Inspekulo (Gynecologic Examination): Mass came out from the vagina, good stomp suture	Grade III vaginal stomp prolaps + Post TAH for uterine prolapse + Grade III cystocele + Grade IV rectocele	Sacrospinous fixation + anterior and posterior colporrhaphy
	Married: 1x à 16 years	Operation History: Post TAH for uterine prolapse in 2 years previously	Vaginal toucher: Mass came out from the vaginal stomp, anterior + posterior wall of the vagina		
	Contraception history: Sexual activity: active		POP Q: Aa +3 Ba +4 C +4 GH 5 Pb 3 TVL 7 AP +3 Bp +6 D -		
5	Mrs. NIK 58 y.o Parity 4004 Youngest child: 22 y.o	Lump came out of the vagina	Inspekulo (Gynecologic Examination): Pessary attached, good stomp suture	Vaginal stomp prolapse + Post TAH-BSO for uterine prolapse + Grade III cystocele + Grade II rectocele	Sacrospinous fixation + anterior and posterior colporrhaphy

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Table 1 continued

	Married: 1x à 42 years Contraception: injection 3 monthly	Operation History: Post TAH-BSO for uterine prolapse in 3 years previously	Vaginal toucher: Mass came out from the vaginal stomp, anterior + posterior wall of the vagina POP Q: Aa +3 Ba +3 C +2 GH 4,5 Pb 2,5 TVL 6 AP +1 Bp +1 D -		
6	Sexual activity: active Mrs. ROS 51 y.o Parity 2002 Youngest chield: 17 years	Lump from the vagina	Inspekulo (Gynecologic Examination): Mass came out from the vagina, vaginal stomp was good	Grade III vaginal stomp prolapse + Post TAH-BSO for uterine prolapse + Grade IV cystocele + Grade III rectocele	Colpocleisis
	Married 2x: 1. 1990-1991 2. 1990-2013 Contraception history: Pills	Operation History: TAH-BSO for uterine prolapse in 7 years previously	Vaginal toucher: Mass came out from the vagina POP-Q: Aa +3 Ba +5 C +4 GH 3 Pb 2 TVL 7 AP +3 Bp +4 D -		
7	Sexual activity: not active Mrs. TUM 61 y.o Parity 5015 Youngest child : 29 y.o	Lump from the vagina, difficult urinating (dysuria)	Inspekulo (Gynecologic Examination): a slippery portio, a mass came out fromr the anterior vagina	Grade I cervical stomp prolapse + Post SVH for uterine prolapse + Grade IV cystocele	Sacrospinous fixation + anterior and posterior colporrhaphy
	Married 1x à 47 years Contraception history: Injection 3 monthly	Operation History: Post SVH for uterine prolapse in 2 years previously	Vaginal toucher: Mass came out from the anterior of the vagina POP-Q: Aa +3 Ba +5 C –2		

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Table 1 continued

			GH 5 Pb 2 TVL 7 AP -3 Bp -3 D -3		
	Sexual activity: Not active				
8	Mrs. UMU 59 y.o Parity 2002 Youngest child: 27 y.o	Unsatisfied and incomplete urination (Urinary retention)	Inspekulo (Gynecologic Examination): a mas came out from the vagina, good stomp suture	Grade IV vaginal stomp prolapse + Post TAH BSO for uterine prolapse + grade IV cystocele + grade III rectocele	Sacrospinous fixation + anterior and posterior colporrhaphy
	Married 1x à 47 years	Operation History: Post TAH-BSO for uterine prolapse in 4 years previously	Vaginal toucher: A mass came out from the anterior vagina + vaginal stomp		
	Contraception history: 3 months injection		POP-Q: Aa +3 Ba +4 C +5		
	Sexual activity: active		GH 5 Pb 3 TVL 6 AP +3 Bp +3 D -		
9	Mrs. PUJ 64 y.o Parity 4004 Youngest child: 28 y.o	Unsatisfied and incomplete urination (Urinary retention)	Inspekulo (Gynecologic Examination): A slippery portio, a mass came out from the anterior vagina	Grade II cervical stomp prolapse + Post SVH-BSO for uterine prolapse + Grade III cystocele	Sacrospinous fixation + anterior and posterior colporrhaphy
	Married 1x à 42 years	Operation history: Supravaginal hysterectomy- bilateral salpingo-oophorectomy for uterine prolapse in 5 years previously	Vaginal toucher: A mass came out from the anterior vagina + vaginal stomp		
	Contraception history:		POP-Q: Aa +2 Ba +3 C +1 GH 5 Pb 2 TVL 7 AP -3 Bp -3 D -3		
	Sexual activity: Not active				

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Table 1 continued

10	Mrs. RIA 68 y.o Parity 8018 Youngest child: 27 years Married 1x à 49 years Contraception history: - Sexual activity: Not active	Lump from the vagina Operation History: Post SVH-BSO for uterine prolapse + adenomyosis in 1 years previously	Inspekulo (Gynecologic Examination): A sippery portio, a mass came out from the posterior vagina Vaginal toucher: A mass came out from posterior vagina, good stomp suture POP-Q: Aa -3 Ba -3 C +4 GH 5 Pb 3 TVL 7 AP +3 Bp +3 D -	Servix stomp prolapse + Post SVH-BSO for uterine prolapse + grade III rectocele post	Trachelectomy transvaginal + anterior and posterior colporrhaphy
11	Mrs. JUL 62 y.o Parity 2002 Youngest chield: 25 y.o Married 1x à 25 years Contraception history: 3 months injection Sexual activity: Not active	Lump from the vagina, painful urinating (dysuria) Operation History: Post TVH for uterine prolapse in 1 years previously	Inspekulo (Gynecologic Examination): A mass came out from from the anterior wall of the vagina + vaginal stomp + 7 cm Vaginal toucher: A mass came out from the anterior wall + vaginal stomp POP-Q: Aa +3 Ba +5 C +6 GH 6 Pb 2 TVL 6 AP +3 Bp +5 D -	Prolapse vaginal stomp + Post TVH for uterine prolapse + Grade IV cystocele + Nonsexual active	Partial colpopexy + posterior colporrhaphy
12	Mrs. TRA 83 y.o Parity 16-009 Youngest chield: 43 years	Lump from the vagina Operation History: Transvaginal hysterectomy for uterine prolapse in 6 years previously	Inspekulo (Gynecologic Examination): A mass came out from the anterior + posterior wall of the vagina, and vaginal stomp, good stomp suture Vaginal toucher:	Grade IV vaginal stomp prolapse + Post TVH for uterine prolapse + Grade IV cystocele + Grade IV rectocele	Colpocleisis

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Table 1 continued

	Married 1x à 43 years Contraception history: - Sexual activity: not active	Married 1x à 43 years	A mass came out from the anterior wall + the posterior wall of the vagina, vaginal stomp POP-Q: Aa +3 Ba +4 C +4 GH 4 Pb 3,5 TVL 5 AP +3 Bp +4 D -		
13	Mrs. JUW 63 y.o Parity 6006 Youngest chield: 33 years Married 1x à 51 years Contraception history: - Sexual activity: not active	Lump from the vagina, difficult urinating (dysuria) Operation History: Post TVH for uterine prolapse in 4 years previously	Inspekulo (Gynecologic Examination): A mass came out from the anterior wall of the vagina + vaginal stomp, good stomp suture Vaginal toucher: A mass came out from anterior vaginal wall + vaginal stomp POP-Q: Aa +3 Ba +2 C +3 GH 4 Pb 3 TVL 7 AP -3 Bp -3 D	Prolapse vaginal stomp + Post TVH for uterine prolapse + Grade III cystocele	Sacrospinous fixation + anterior and posterior colporrhaphy
14	Mrs. SUM 52 y.o Parity 6015 Youngest chield: 22 y.o Married 2x: 1.1985-2012 2. 2012-3 years (husband died Contraception history: - Sexual activity: Not active	Lump from the vagina Operation History: Post TVH for uterine prolapse in 1 year previously	Inspekulo (Gynecologic Examination): A mass came from anterior and posterior vaginal wall, the vaginal stomp comes out of the vaginal introitus Vaginal toucher: A mass came out from the anterior and posterior vaginal wall, the vaginal stomp comes out of the vaginal introitus POP-Q: Aa +1 Ba 0 C +5 GH 4 Pb 3 TVL 6 AP +3 Bp +2 D -	Grade IV vaginal stomp prolapse + Post TVH for uterine prolapse + Grade II cystocele + Grade III rectocele	Le Fort Colpocleisis

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Table 1 continued

15	Mrs. SUN 62 y.o Parity 2002 Youngest chield: 34 years	Lump from the vagina	Inspekulo (Gynecologic Examination): A mass came out from the anterior + posterior vaginal wall, vaginal stomp, good stomp suture	Prolapse vaginal stomp + Post TVH for uterine prolapse + Grade IV cystocele + Grade III rectocele	Anterior and posterior colporrhaphy
	Married 1x à 1980-1997 (husband died)	Operation History: Post TVH for uterine prolapse in 2 years previously	Vaginal toucher: A mass came out from the anterior + posterior vaginal wall + vaginal stomp		
	Contraception: injection 3 monthly		POP-Q: Aa +3 Ba +3 C +1		
	Sexual activity: Not active		GH 5 Pb 3 TVL 7 AP +3 Bp +3 D -		
16	Mrs. AMA 60 y.o Parity 4004 Youngest child: 34 y.o	Lump from the vagina	Inspekulo (Gynecologic Examination): A mass came out from anterior + posterior vaginal wall, vaginal stomp, good stomp suture	Grade IV vaginal stomp prolapse + Post TVH for uterine prolapse + Grade IV cystocele + Grade III rectocele	Sacrospinous fixation + anterior and posterior colporrhaphy
		Operation History: Post TVH for uterine prolapse in 1 year previously	Vaginal toucher: A mass came out from anterior + posterior vaginal wall, vaginal stomp		
	Married 1x à 45 years Contraception: -		POP-Q: Aa +3 Ba +4 C +4 GH 5 Pb 2 TVL 6		
	Sexual activity: Not active		AP +3 Bp +2 D -		

Most patients have complaints of recurrent lumps and complaints of urinary disorders. In 2015-2019, the total number of cases of transvaginal hysterectomy (TVH) surgery in Dr. Soetomo General Hospital were 187 cases. In 2015-2019 there were 16 patients diagnosed with vault prolapse with a preoperative diagnosis of uterine prolapse (16 cases). Of the 16 cases of vault prolapse, 10 cases (62.50%) were post transabdominal hysterectomy procedure, and 6 cases (37.5%) were post transvaginal hysterectomy procedure, the distribution of cases in some hospital such as Dr. Soetomo General Hospital (3 cases), another cases performed outside Dr. Soetomo General Hospital. Describe in Table 1.

Of the 10 cases that were performed transabdominal surgery, 4 patients (40%) had suffered vault prolapse in the same year as the surgery, while the mean time of recurrence was 3.5 years. Of the 6 cases that were performed transvaginal surgery, 3 patients (50%) had suffered vault prolapse in the same year as the surgery and the mean time of vault prolapse insidence was 1 years.

From the patient characteristics that were suspected to be associated with risk factors for recurrence, it was found that the post-transabdominal hysterectomy vault prolapse case had an average age of 52.3 years, an average parity of 4, and an average BMI of 32. From the characteristics of post-transvaginal hysterectomy vault prolapse patients, they had an average age of 63.66 years, an average parity of 6, and an average BMI of 27.48.

4. Vault prolapse diagnosis

The assessment of women with symptoms of prolapse after hysterectomy should include a physical examination and a fundamental prior history. Current recommendations for objective assessment of vaginal support include the use of the Pelvic Organ Prolapse Quantification (POP-Q) system. Determination of apical prolapse or vault prolapse is done by measuring the location, relative to hymen with hysterectomy scar (point C) during maximal valsalva maneuver and/or traction during examination. As described, apical prolapse is often associated with more severe anterior or posterior compartment prolapse, so it is important to identify this in order to formulate an appropriate reparations strategy. [3]

In our urogynecology outpatient clinic, we diagnosed vault prolapse based on history taking dan physical examination. The most important from history taking are about chief complaint such as lump came out from her vagina and any complaint related cystocele and rectocele, and her sexual activity. In physical examination, we used inspekulo, vaginal toucher and POP-Q to evaluate vault prolapse's grade or severity and evaluate if the vault prolapse including anterior or posterior compartment. As a noted, in our hospital we used terminology vault prolapse with "stomp prolaps" or "apical prolapse". After diagnosed the patient, this data was discussed in urogynecology department of obstetrics and gynecology to make consideration about the preparation of the second operation and what technique that appropriate for the patient.

Table 2: Characteristics of postoperative patients with vault prolapse repair at Dr. Soetomo General Hospital 2015-2019

Characteristics		**%**
Age		
< 60 years-old	6	37.5
> 60 years-old	10	62.5
Parity		
0	0	0
1-2	5	31.25
≥ 3	11	68.75
Number of Vaginal Deliveries		
0	0	0
1-2	5	31.25
≥ 3	11	68.75
Body Mass Index		
Underweight (< 18.5)	0	0
Normal (18.5-24.99)	7	43.75
Overweight (> 25-29.99)	8	50
Obesity (> 30)	1	6.25
Refferal Status		
By reference	16	100
Come on their own accord (w/o reference)	0	0
Race		
Javanese	13	81.25
Madurese	3	18.75
Others	0	0
Education		
Elementary/Primary School	7	43.75
Junior High	3	18.75
High school	5	31.25
University	1	6.25
Profession/Occupation		
Housewife	12	70.58
Traders	4	13.53
Previous Operation Techniques		
Supravaginal hysterectomy	4	37.50
Total abdominal hysterectomy	6	9.59
Transvaginal hysterectomy	6	37.50
Recurrence After Post Vault Prolapse Correction (second reccurence)		
Yes	2	5.88
No	15	88.23

5. Vault Prolapse Management

Procedure of vault prolapse is broadly divided into conservative and operative procedures. Conservative procedure includes pelvic floor exercises, stamping and pessaries placement. The role of this conservative procedure is unclear and there is still no evidence that pelvic floor muscle training is useful.[4] However, pessaries may have limited benefits in patients who fear surgery and in very old women – where surgery is not an option.

Guidelines for determining surgery in cases of vault prolapse have almost the same principles in cases of genital organ prolapse which are planned for vaginal surgery. It is important to ask whether the woman (patient) is sexually active before considering vaginal surgery, as this can change surgery options. Another factor that influences the choice of surgery is patient suitability and surgeon preference.[5]

In our hospital, we performed various procedure for vault prolaps correction procedure such as transvaginal trachelectomy, colpoclesis, sacrospinous fixation. We gave information to the patient about the procedure, advantage and disadvantage and the chance of after the procedure.

Of the 10 cases of post-transabdominal hysterectomy vault prolapse, reoperation was performed at Dr. Soetomo General Hospital with various procedures; transvaginal trachelectomy + anterior and posterior colporrhaphy (2 cases), colpocleisis (2 cases), and sacrospinous fixation + anterior and posterior colporrhaphy (6 cases). There was 1 case after got vault prolaps correction preocedure with sacrospinous fixation + anterior and posterior colporrhaphy procedure had reccured again and then reoperated with trachelectomy + anterior and posterior colporrhaphy + sacrospinous fixation procedure in Dr. Soetomo General Hospital.

Of the 6 cases of post transvaginal hysterecromy vault prolapse, reoperation was performed with various procedures; colpocleisis (2 cases), Partial colpopexy + posterior colporrhaphy (1 case), sacrospinous fixation + anterior and posterior colporrhaphy (2 case), and anterior and posterior colporrhaphy (1 case). There was 1 case of post sacrospinous fixation + anterior and posterior colporrhaphy had reccured again recurred again and was performed correction with another sacrospinous fixation + anterior and posterior colporrhaphy operation in Dr. Soetomo General Hospital.

After the operation, patients are communicated, informed, and educated to avoid risk factors associated with 'relapse' such as to avoid heavy lifting activities and sexual intercourse for 6-8 weeks. From a total of 16 cases of vault prolapse that were reoperated with various procedures, the surgery success rate was 87.5%.

6. Conclusion

At Dr. Soetomo General Hospital, the number of cases vault prolapse post transabdominal and transvaginal surgeries has a similar percentage of cases. Various corrective action procedures were re-performed by the Urogynecology Division of Obstetrics and Gynecology, Dr. Soetomo General Hospital with good result.

7. Source of Funding

None.

8. Conflict of Interest

The authors declare that there is no conflict of interest.

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