Original Article

An Audit of Hysterectomy at Jinnah Postgraduate Medical Centre, Karachi

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Abstract

Objective: To find out the frequency of different types of hysterectomies and its intra and postoperative complication.

Methodology: This retrospective review of record study was conducted at Jinnah post graduate Medical Centre from Jan 2020-Dec 2020 in which Details of patients were obtained from medical record registers and files of patients during the year 2020 who underwent hysterectomies of any type for any reason whether benign or malignant gynecological disorders or obstetrical reasons, their demographic features, indications and intra and postoperative complications were noted on pre designed Performa.

Results: Total of 260 hysterectomies were performed. About 154(59.2%) abdominal hysterectomies were performed for different benign and malignant gynecological reasons, vaginal hysterectomies in 27(10.38%) patients, and obstetrical hysterectomies in 79 (45.0%) of patients. 146 (56.1%) majority of the patients were found in age group of 36-50year. The most common gynecological indication was fibroid uterus 55(22.1%) and the second common indication was in UV prolapse in 27(10.3%) cases. Most common indication of obstetrical hysterectomy was morbidly adherent placenta in 68(26.1%) of patients. Iatrogenic Bladder injuries were 10(3.8%). Ureteric injuries were found in 2(0.8%). Iatrogenic gut injuries were observed in 5(1.9%) patients. Post-operative wound infections were noted in 10(3.8%), vaginal infections in 4(1.5%), paralytic ileus in 5(1.9%) and burst abdomen was found in 2(0.8%) cases.

Conclusion: In conclusion, the procedure "Hysterectomy" is expected to have intra and postoperative complications especially if it is done for the morbidly adherent placenta and malignant ovarian tumors and patients with previous surgeries, this complication can be dealt effectively with a multidisciplinary approach to avoid long lasting consequenceies.

Keywords: abdominal hysterectomy, morbidly adherent placenta, vaginal hysterectomy

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Introduction

The word Hysterectomy means surgical excision of uterus. The first hysterectomy was done in 1843 by Charles Clay in Manchester England.[1] Hysterectomy is one of the most common gynecological and second commonly performed procedures after cesarean section.[2]

Hysterectomy varies between the countries ranging from 2.13-3.62/1000 in Germany to 5.4/1000 in the United States, In India estimated incidence of hysterectomy, was 20.7/1000 women with a mean age of 36 years.[3] In Pakistan the rate of hysterectomy is 6.6/1000 female population.[4] There are many types of hysterectomies subjected to the route of removal of the uterus are abdominal and vaginal hysterectomy, determined by the equipment used for removal of the uterus is laparoscopic hysterectomy, depending upon the removal of parts of uterus, removal of whole uterus or cervix is left, a total of Subtotal hysterectomy, with or without removal of tubes and ovaries, total abdominal hysterectomy(TAH) with

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bilateral (TAH&BSO) or unilateral salpingo-oophorectomy(TAH&USO). If the parametrial and para cervical tissues also removed with uterus along with cuff of the vagina and pelvic lymph nodes the name is given radical (Wertheim) hysterectomy which is usually done in women with cancer.

Types of hysterectomy depend on route of access, about 66% of hysterectomies are done by open abdominal route, 22% through vaginal, and 12% performed through laparoscopic route.[5] Abdominal route is preferred where uterus is significantly enlarged and fixed and when there is adnexal pathology with obliteration of pouch of Douglas or inadequate vaginal access. Vaginal hysterectomy is mainly done for uterovaginal prolapse or benign gynecological pathology when uterus size is below or equals to twelve weeks.[6]

Vaginal hysterectomy is preferred when technically possible; in abdominal hysterectomy, there is an increased risk of blood loss, abdominal and wound infections, longer hospital stay, and slow recovery. While laparoscopic hysterectomy needs training and equipment having longer operative time.[7]

There are different indications for a hysterectomy which may be gynecological as well as obstetrical. Abdominal hysterectomy is generally performed for benign gynecological problems like fibroid uterus, menstrual irregularities, adnexal mass, uterovaginal prolapse, endometriosis, adenomyosis, Pelvic inflammatory disease, and malignant tumor of ovaries, uterus, and cervix. Hysterectomy is a definitive treatment approach where medical, hormonal and uterine conservative procedures like resection, ablation, myomectomy, uterine artery embolization (UAE), and levonorgestrol intrauterine system (LNG-IUS) fails to cure and where lack of these facilities and expertise are lack in developing countries like Pakistan.[4,8]

Obstetrical or peripartum hysterectomy is done for the complication of cesarean and vaginal delivery to save the life of women, having longest duration, requires a large amount of blood replacement, high risk for complications. The incidence of peripartum hysterectomy (PH) shows fifty-fold variation worldwide (0.2–10.5/1000 deliveries) and risk factors include advancing maternal age and parity, previous caesarean section (CS), and abnormal placentation.[9]

Like other procedures, hysterectomy is also associated with intraoperative and postoperative complications. Intraoperative complications are haemorrhage(0.2-2%), traumatic injuries to ureter(o.7-1.7%), bladder(1-2%) and bowel(0.2-2%) and postoperative infections(10%) like wound infection, , burst abdomen with abdominopelvic infections, vaginal infections[10]. gut Paralysis(9.2%)[11], and lately vault prolapsed(6-8%)[12], lifetime risk of cervical cancer(0.33%)[13] and ovarian cancer in 2%[14] of patients undergoing Sub-Total and Total hysterectomies respectively.

The basic aim of this study is to acquire a better understanding of the practices, to scrutinize the indications and complications of different types of hysterectomies performed for benign, malignant gynecological Conditions, and for obstetrical reasons to improve quality of care in the future. This study will also enable us to compare the practices of our institute with other hospitals.

Methodology

After taking Permission from the Ethical Review Committee of the Institute this audit was conducted in the Department of Obstetrics and Gynaecology, Jinnah postgraduate medical centre, Karachi from 1st January to 31st December 2020. A detail review of case records were obtained from medical registers and files of patients. In this study all those patients included who underwent any type of hysterectomy whether abdominal, vaginal or obstetrical admitted through OPD or emergency irrespective of age, parity, gestational age (in case of pregnancy), the status of delivery, and medical problems were selected, there were no exclusion criteria. Their intraoperative complications were noted in terms visceral injuries like ureter, bladder, and gut iatrogenic injuries and their postoperative complications like urinary tract infection, paralytic ileus, vaginal, abdominal wound infection, and burst abdomen were also collected. All hysterectomies were performed by faculty members having post-graduation experience of more than 5 years were involved in cases of intra-operative iatrogenic visceral injuries.

Data was entered and analyzed on SPSS version 25 statistical software. Frequency and percentages were calculated for age, emergency/elective hysterectomies, type of anesthesia, type of hysterectomies (abdominal, vaginal, and obstetrical), and for their indication.

Frequency and percentages of intra-operative complications of iatrogenic injury of ureter, bladder, and gut, post-operative infections like burst abdomen vaginal wound infections, burst abdomen, paralytic ileus, and urinary tract infections were also calculated.

Results

During the year 2020 total of 260 hysterectomies were performed out of which 215 (82.69%) were performed in elective theater while 45(17.3%) were in the emergency theater. About 154(59.2%) abdominal hysterectomies were performed for different benign and malignant gynecological reasons, vaginal hysterectomies in 27(10.38%) patients, and obstetrical hysterectomies in 79 (45.0%) patients. Total abdominal hysterectomy with bilateral salpingo-oophorectomy (TAH+BSO) was performed in 129(49.61%), TAH (TAH+USO) with the removal of one ovary in 7(2.69%), and TAH with conservation of ovaries in 18(6.92%) cases.

Regarding the age of patients, 146 (56.1%) patients were found in the age group of 36-50year, 71(27.30%) in age group of 16-35years, 42(16.1%) in the age group of >51, and 1(0.38%) patients was operated <15years of age.

Most common gynecological indication was fibroid uterus 56(21.5%) and second common indication was UV prolapse in 27(10.3%) cases, abnormal uterine bleeding (AUB) in 22(8.5%), CA ovary in 16(6.2%) ,ca endometriun in 12(4.6%),endometriosis in 5(1.9%), 3(1.2%) in combine adnexal and fibroid, 3(1.2%) in liomyosarcoma, 3(1.2%) in recurrent hematometra), 2(0.8%) in adenomyosis,1(0.4%) in CA- cervix , 1(0.4%) in endometrial polyp and 4(1.4%) abdominal hysterectomies were done due to early pregnancy related problems like molar pregnancy in 2(0.8%), uterine perforation in1(0.4%), and 1(0.4%) for scar site ectopic pregnancy (Table I).

About 79 (45.0%) of obstetrical hysterectomies were performed for different reasons, mainly for morbidly adherent placenta 68(26.1%), 6(2.3%) for ruptured uterus, 3(1.2%) for primary PPH, 1(0.4%) for each puerperal sepsis, uterine perforation, Post op cesarean scar dehiscence. (Table I)

Table I: Most common gynecological indication

Indications	Sub-indications	Count	%
Benign gynaecological causes	Fibroid uterus	56	21.5%
	Benign Adnexal mass	26	10.0%
	AUB	22	8.5%
	Endometriosis	05	1.9%
	Benign Adnexal mass + Fibroid uterus	03	1.2%
	Recurrent Hematometra	03	1.2%
	Adenomyosis	02	0.8%
	Endometrial polyp	01	0.4%
Malignant Gynaecological Causes	Ca- Ovary	16	6.2%
	Ca-Endometrium	12	4.6%
	Leomyosarcoma	03	1.2%
	Ca-Cervix	01	0.4%
Early pregnancy related hysterectomy	Molar pregnancy	02	0.8%
	Scar site ectopic	01	0.4%
	Uterine perforation	01	0.4%
Obstetric hysterectomy	Morbidly Adherent Placenta	68	26.2%
	Ruptured uterus	06	2.3%
	Primary PPH	03	1.2%
	Scar dehiscence	01	0.4%
	Perpeural sepsis	01	0.4%
Uv prolapse	UV Prolapse	27	10.8%

Regarding iatrogenic bladder injuries, there were 10(3.8%). 2(0.8%)Patients who developed bladder injuries in the procedure of TAH one was with pervious 4 cesarean section other was having big large fibroid, and 8(3.07%)of patients who underwent obstetrical hysterectomy for morbidly adherent placenta developed bladder injuries. Ureteric injuries were found in 2(0.8%) cases one in case of TAH &BSO in that case indication was large cervical fibroid and the other one in obstetrical hysterectomy for percreta with massive haemorrhage (Table II).

Latrogenic gut injuries were observed in 4(1.53%) patients, who underwent TAH &BSO cases one patient of TAH with history of multiple laparotomies and three were in the cases who underwent TAH &BSO for malignant ovarian tumor (Table II). Paralytic ileus developed in 5(1.92%) patients, 3(1.1%) in TAH&BSO,

Table II: intraoperative complications

Procedure	Iatrogenic bladder injury	Ureteric injury	Iatrogenic ureteric and gut injury	Iatrogenic gut injury	NIL
TAH	02	0	0	01	15
TAH+BSO	0	01	01	03	125
TAH+USO	0	0	0	0	07
Obs Hysterectomy	08	0	0	0	70
VH	0	0	0	0	27
	10 (3.84%)	01 (0.38%)	01 (0.38%)	04 (1.53%)	244 (93.8%)

Table III: Postoperative Complications

Procedure	UTI	Vaginal infection	Abdominal wound infection	Burst abdomen	Paralytic ileus	Nil
TAH	0	0	01	0	0	17
TAH+BSO	03	02	06	01	03	114
TAH+USO	01	0	01	0	01	04
Obs Hysterectomy	05	0	02	01	01	70
VH	04	02	0	0	0	21
	13(5%)	04 (1.5%)	10 (3.84%)	02 (0.76%)	05 (1.92%)	226 (86.9%)

1(0.4%) for each TAH&USO and obstetrical hysterectomy (Table III). Post-operative Urinary tract infections were found in 13(5%) cases. 5(1.9%) of obstetrical hysterectomies, 4(1.5%) of vaginal hysterectomies, and 3(1.1%) for each TAH&BSO and

1(0.3%) TAH&USO. Vaginal infections were observed in 2(0.8%) vaginal hysterectomies and1 (0.4%) patients of TAH BSO. Wound infection were seen in 10(3.8%) cases 2(0.8%) of obstetrical hysterectomies 1(0.4%) for each TAH, TAH&USO and 6(2.3%) in TAH&BSO. Burst abdomens were noticed in 1(0.4%) patients of TAH BSO and 1(0.4%) who underwent obstetrical hysterectomies (Table III).

Discussion

A total number of gynecological patients seen in the OPD of the department of obstetrics and gynecology, JPMC Karachi were 20138 during the year 2020, a total number of patients operated for gynecological reasons were 2458 so the frequency of hysterectomy for gynecological procedures was calculated as7.4%(3.01/1000) in our study while a study from Nigeria reported the incidence of 9.29%,[15] in united states 5.4/1000,[3] in India 20.7/1000.[3] and Pakistan 6.6/1000 female population[4], Total of number obstetric procedures were performed about 6139 so the frequency of obstetrical hysterectomy among obstetrical procedures was 1.3%. The total number of deliveries were 18510 so the risk of obstetrical hysterectomy among the delivering patients was calculated as 4.3/1000 women in this study while previous studies of JPMC shows the risk of 3/1000 in one study and2.7/1000 in another study.[16,17]

A study from India reported the prevalence of abdominal hysterectomy of **75.5%** while vaginal 17.8% and we observe the same finding in our study, about 154(59.23%) were abdominal, about 27(10.38%) vaginal hysterectomies were performed for different gynecological reasons.[18] Most common indication of abdominal hysterectomies was fibroid uterus, almost similar finding was noticed from many studies.[18,19,20] second main indication in our study is utero-vaginal prolapse in our study which is comparable to other study[20], while AUB was second common indication in another studies.[3,18]

Trends of indication of obstetrical hysterectomy has been completely changed, previously most common reasons of peripartum hysterectomy were atony of uterus and ruptured uterus in JPMC,Karachi[15,16] now it becomes the least indication because of discovery of excellent results of balloonTamponade[21], with the rising rate of cesarean section morbidly adherent placenta(MAP) has appeared as a most frequent cause of Obstetrical hysterectomy in this study, same results were acquired from the study conducted at tertiary care hospital[20] while other studies reported MAP as the second commonest cause.[22,23]

We found post operative infection rate in 29 (11.1%) cases out of 260. In contrast study by Deeshak Panday from India[18] reported incidence of post infections in 14(2.7%) cases, but almost the same post operative infections rate about 10% was described by AH Decherney and Lauren Nathan et al.[10] In our study we observed Iatrogenic Bladder injuries were 10(3.8%), Ureteric injuries were found in 2(0.8%) and Iatrogenic gut injuries in 5(1.9%) patients, while one study reported 5(0.9%) bladder injury,1(0.1%) urteric injury and 2(0.3%) bowel injuries in 527 hysterectomies.[10]another study also showed 1 to 2% bladder injury,0.05 to 0.5% urteric injury and 0.3% bowel injuries in abdominal Hysterectomies.[24]

The year 2020 was the year of corona pandemic in this year elective surgery was kept at a minimum especially From February to August so rate of hysterectomy is reduced especially vaginal hysterectomies and a number of patients attended Gynae OPD was also reduced.

Conclusion

Hysterectomy is the most frequent surgical procedure performed worldwide there must be a clear indication, a conservative approach should be considered first if needed for benign gynecological problems as This procedure is not devoid of intra and postoperative complications especially those with malignant ovarian tumors, percretas and with previous multiple surgeries but in expert hands with prior arrangement of blood and prompt involvement of expert urologist and surgeons and best postoperative care these complications can be prevent and managed effectively.

References

1. Sutton C. 1 Hysterectomy: a historical perspective. Bailliere's clinical obstetrics and gynaecology. 1997 ;11(1):1-22.
2. Neis KJ, Zubke W, Fehr M, Römer T, Tamussino K, Nothacker M. Hysterectomy for benign uterine disease. Deutsches Ärzteblatt International. 2016; 113(14):242.
3. Desai S, Campbell OM, Sinha T, Mahal A, Cousens S. Incidence and determinants of hysterectomy in a Tertiary Care Hospital. Journal of the Nepal Medical Association. 2020;58(232):965- 70.
4. Bhatti K, Lashari AA, Shaikh F. A clinico pathologic correlation of elective abdominal hysterectomy at teaching hospital Khairpur, Pakistan. Rawal Medical Journal. 2013;38(2):143-6.
5. Wu JM, Wechter ME, Geller EJ, Nguyen TV, Visco AG. Hysterectomy rates in the United States, 2003. Obstetrics & Gynecology. 2007; 110(5):1091-5.
6. Johanna A, Nieboer J, Emma T, Garry R, Mol BW, Kluivers K. Surgical approach to hysterectomy for benign gynaecological disease. Cochrane Database of Systematic Reviews. 2015; 8.
7. *King CR, Giles D.* "Total Laparoscopic Hysterectomy and Laparoscopic-Assisted Vaginal Hysterectomy". Obstetrics and Gynecology Clinics of North America.2016; 43(3): 463–78. *Doi:10.1016/j.ogc.2016.04.005*. *PMID 27521879*.
8. Amin A, Ali A, Amin Z, Sani FN. Justification for hysterectomies and frequency of histopathological lesions of hysterectomy at a Teaching Hospital in Peshawar, Pakistan. Pak Jr Med Sci. 2013; 29(1):170.
9. Huque S, Roberts I, Fawole B, Chaudhri R, Arulkumaran S, Shakur-Still H. Risk factors for peripartum hysterectomy among women with postpartum haemorrhage: analysis of data from the WOMAN trial. BMC pregnancy and childbirth. 2018; 18(1):1-8.
10. Decherney AH, Nathan L, Laufer N, Roman A S.Therapeutic gynecologic procedures. Current Diagnosis and Treatment Obstetrics & Gynecology. 2019 12th edition 804-821
11. Li ZL, Zhao BC, Deng WT, Zhuang PP, Liu WF, Li C, Liu KX. Incidence and risk factors of postoperative ileus after hysterectomy for benign indications. International Journal of Colorectal Disease. 2020;35(11):2105-12.
12. Hinterholzer S, Geiss I, Riss P. An estimation of the frequency of surgery for post hysterectomy vault prolapse. Int Urogynaecol J. 2010; 21: 299-302.
13. Rechberger T, Perżyło K, Miotła P, Nowak-Markwitz E, Zaborowski M, Lemańska A, Baranowski W, Nowakowski A, Reinholz-Jaskólska M, Sawicki W. Carcinoma of the cervical stump–multicenter study. Ginekologia polska. 2014;85(6).
14. Loft A, Lidegaard Ø, Tabor A. Incidence of ovarian cancer after hysterectomy: a nationwide controlled follow up. BJOG: An International Journal of Obstetrics & Gynaecology. 1997 ;104(11):1296-301.
15. Awoleke JO. An audit of hysterectomy at the Lagos University Teaching Hospital, Lagos. Tropical Journal of Obstetrics and Gynaecology. 2012;29(1):96-102.
16. Korejo R, Jafarey SN. Obstetrics Hysterectomy-Five Years Experience At Jinnah Postgraduate Medical Centre, Karachi. Journal-Pakistan Medical Association. 1995;45:86-.
17. Korejo R, Nasir A, Yasmin H, Bhutta S. Emergency obstetric hysterectomy. J Pak Med Assoc. 2012 Dec 1; 62(12):1322-5.
18. Pandey D, Sehgal K, Saxena A, Hebbar S, Nambiar J, Bhat RG. An audit of indications, complications, and justification of hysterectomies at a teaching hospital in India. International journal of reproductive medicine. 2014; 2014.
19. AG, Shaikh SN. Abdominal Hysterectomy for Benign Diseases. Journal of Surgery Pakistan (International). 2018; 23:3.
20. Yildirim GY, Koroglu N, Akca A, Talmac M, Dikmen S, Yıldırım G, Polat I, Ozdemir I. What is new in peripartum hysterectomy? A seventeen year experience in a tertiary hospital. Taiwanese Journal of Obstetrics and Gynecology. 2021;60(1):95-8
21. Suarez S, Conde-Agudelo A, Borovac-Pinheiro A, Suarez-Rebling D, Eckardt M, Theron G, Burke TF. Uterine balloon tamponade for the treatment of postpartum hemorrhage: a systematic review and meta-analysis. American journal of obstetrics and gynecology. 2020;222(4):293-e1.
22. Aziz S, Ashfaq S, Sultan S, Tahir H, Iqbal F, Hassan M, Irfan SM. Indication of emergency hysterectomy in Pakistani patients. J Soc Obstet Gynaecol Pak. 2017;7(1):45-9.
23. Maraschini A, Lega I, D'Aloja P, Buoncristiano M, Dell'Oro S, Donati S, Regional Obstetric Surveillance System Working Group, Basevi V, Dardanoni G, Dubini V, Lupi C. Women undergoing peripartum hysterectomy due to obstetric hemorrhage: a prospective population-based study. Acta obstetricia et gynecologica Scandinavica. 2020;99(2):274-82.
24. Clarke-pearson DL,Geller EJ.Complication of hysterectomy.obstet Gynecol 2013;121:654-73