

## SURVEY ABOUT INCIDENCE, INDICATIONS, COMPLICATIONS AND TYPES OF HYSTERECTOMY IN EL-TAHRIR GENERAL HOSPITAL DURING 2018 – 2019

By

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### ABSTRACT

**Background:** Hysterectomy is one of the most frequent surgical procedures for women and has been under discussion since the 1970s because of regional and international variations in incidence, indications and surgical methods.

**Objectives:** was to present an updated assessment for incidence, indications, complications and types of hysterectomy from the available data about the patients at El-Tahrir general hospital (Imbaba) and compare the results of this thesis to the worldwide results.

**Patients and methods:** This is a retrospective study, was carried at Obstetrics & Gynecology department at Al-Tahrir general hospital under supervision of Obstetrics and Gynecology Department, Faculty of Medicine, on 250 pregnant females, Al-Azhar University, from August 2019 till December 2020.

**Results:** operation data according to type of operation, there are 16 (6.4%) Hysterectomy (caesarean-hysterectomy), 116 (46.4%) Hysterectomy (sub-total), 134 (53.6%) Hysterectomy (total), 1 (0.4%) Laparoscopic hysterectomy, 7 (2.8%) Vaginal hysterectomy, according duration of surgery there are 226 (90.4%) <2hours, 24 (9.6%) > 2 hours.

**Conclusion:** as any surgical procedure, hysterectomy is also associated with complications during and after surgery. Therefore, the indication for hysterectomy should be carefully evaluated. Hence reporting of all hysterectomies should be made mandatory so that the audit results can be used for improvement in the quality of health services.

**Keywords:** abdominal hysterectomy, Complications, Laparoscopic hysterectomy, Indications, Vaginal hysterectomy.

### INTRODUCTION

The uterus is the inverted pear-shaped female reproductive organ that lies in the midline of the body within the pelvis between the bladder and the rectum. It is a dynamic female reproductive organ that is responsible for several reproductive functions including menses, implantation, gestation, labor and delivery. The uterus

adjusts to reflect changes in ovarian steroid production during the menstrual cycle (Gould *et al.*, 2020).

The ovaries are small oval – shaped and grayish in color with on uneven surface. They have endocrine function in addition to reproductive function as it contains what's called ovarian follicles

(*Structural Informatics Group at the University of Washington, 2017*).

Hysterectomy is the most common non-pregnancy related major surgery performed on women. This surgical procedure involves removal of the uterus and cervix and for some conditions the fallopian tubes and ovaries (*Institute for Healthcare Policy & Innovation, August 2019*).

Reasons for choosing this operation are treatment of uterine cancer and various common non-cancerous uterine conditions such as fibroids, endometriosis, prolapse, adenomyosis, chronic pelvic pain and abnormal uterine bleeding that leads to decrease levels of pain, discomfort, uterine bleeding and emotional stress. Although this procedure is highly successful in curing the disease of concern, it's a surgical alternative with the accompanying risks, morbidity and mortality (*labblog.uofmhealth.org, August 2019*).

Fibroids or leiomyomas: Account for one third of hysterectomies and one fifth of gynecological visits. They are benign uterine tumors that increase in size and frequency as women age but revert in size postmenopausally (*Heinonen et al., 2017*).

Endometriosis: is responsible for approximately one fifth of hysterectomies and it affects women during their reproductive years. it is a disease in which tissue similar to the endometrium is present outside the endometrial cavity (in other areas of the body). Such sites include all the reproductive organs, bladder, intestines, bowel, colon, and rectum; other sites may include uterosacral ligaments, the cul-de-sac, pelvic sidewalls and surgical scars. Patients may experience

symptoms of pelvic pain during bowel movements, urination and sexual intercourse and infertility or miscarriages. Many women seek hysterectomy for pain relief (*Scutiero et al., 2017*).

Genital prolapse: Is the indication for approximately 15% of hysterectomies various stresses on the pelvic muscles and ligaments can cause significant weakening and, thus, uterine prolapse, the prime cause of insult to the pelvic support structure is child birth (*NICE, 2018*).

There are various hysterectomy procedures including the following: Total abdominal hysterectomy, Supracervical or subtotal abdominal hysterectomy, Radical hysterectomy, Hysterectomy with oophorectomy and salpingo-oophorectomy, vaginal hysterectomy, Laparoscopic assisted vaginal hysterectomy and Total laparoscopic hysterectomy. (*Foundation for Women's Cancer, November 2018*).

## PATIENTS AND METHODS

This study was a retrospective study was carried at Obstetrics & Gynecology department at Al-Tahrir general hospital. The target population for this study was females admitted for hysterectomy, their total number was 250. With **inclusion criteria:** All female patients underwent hysterectomy in El-Tahir general hospital from January 2018 till December 2019. And **exclusion criteria:** 10 cases were excluded due to lack of information like type of operation, time of operation, indication of operation, follow-up after operation, complicated or not in addition to lack of history.

All participants received comprehensive information regarding

objective and the expected benefit of the study. All ethical considerations were taken throughout the whole work.

Permission from the Faculty of Medicine ethical committee was also obtained and approval from institutional review board was taken.

An informed verbal consent from all participants was taken and confidentiality of information was assured.

**Statistical analysis:** Analysis of data was done using Statistical Program for Social Science version 20 (SPSS Inc., Chicago, IL, USA). Quantitative variables were

described in the form of mean and standard deviation. Qualitative variables were described as number and percent. In order to compare parametric quantitative variables between two groups, Student t test was performed. Qualitative variables were compared using chi-square ( $\chi^2$ ) test or Fisher's exact test when frequencies were below five. Pearson correlation coefficients were used to assess the association between two normally distributed variables. When a variable was not normally distributed, A P value < 0.05 is considered significant.

## RESULTS

There are 51(20.4%) <30, 103(41.2%) 30-40, 82(32.8%) 40- <50, 14(5.6%)  $\geq$ 50, the mean of age 37.01( $\pm$  37.0 SD), there are 61(24.4%) Urban, 189(75.6%) Rural, 44(17.6%) with 1 parity, 68(27.2%) with 2 parity, 62(24.8%) with 3 parity, 61(24.4%) with  $\geq$ 4 parity, there are 193(77.2%) married, 26(10.4%) Divorced, 31(12.4%) widow, there are 88(35.2%) housewife, 87(34.8%) Employer, 33(13.2%) Trader, 42(16.8%) other, there are 63(25.2%) in Primary or illiterate education, 108(43.2%) in secondary education, 79(31.6%) in university. There are 35 (14%) had previous surgery, and according to level of surgeon there are 142 (56.8%) Consultant, 18 (7.2%) Specialist, 90 (36%) Resident, there are 6 (24%) Co-morbid condition, according to indications for hysterectomy, 6 (2.4%) ovarian tumor, 2 (0.8%) placenta anomalies, 11 (4.4%) postpartum haemorrhage, 7 (2.8%) cancer of the cervix, 7 (2.8%) cancer of the endometrium, 167 (66.8%) fibroids, 15 (6%) prolapse, 3 (1.2%) ruptured uterus, 3 (1.2%) uterine atony. Operation data

according to type of operation, there are 134 (53.6%) Total hysterectomy, 116(46.4%) Sub-total hysterectomy, 7(2.8%) Vaginal hysterectomy, 242(96.8%) Abdominal hysterectomy, 1(0.4%) Laparoscopic hysterectomy, according duration of surgery there are 226 (90.4%) <2hours, 24 (9.6%) >2hours, according to Estimated blood loss there are 10 (4%) <200, 103 (41.2%) 200-<500, 65 (26%) 500-<1000, 15(6%) 1000-1500, 57 (22.8%) >1500. According to intra-operative complications there are 20 (8%) Haemorrhage ( $\geq$ 500ml), 3 (1.2%) Hematoma, 3 (1.2%) Visceral injury, there is no Vascular injury, 15 (6 %) Other complications requiring treatment and shows that according to post-operative complications there are 7 (2.8%) Haemorrhage/hematoma, 3 (1.2%) Wound infection, 1 (0.4%) Urinary tract infection, 3 (1.2%) Deep vein thrombosis, 1 (0.4%) Pulmonary embolism, 7 (2.8%) Re-laparotomy within 24hours, 33 (13.2%) Anemia (Hb<8g/dl), 31 (12.4%) blood Transfusion (**Table 1**).

Table (1): Distribution of the studied cases according to Descriptive analysis, history, operation data and complications (n = 250)

<b>Age</b>		
<30	51	20.4
30 - <40	103	41.2
40 - <50	82	32.8
≥50	14	5.6
Min. – Max.	24.0 – 51.0	
Mean ± SD.	37.01 ± 37.0	
Median (IQR)	7.85 (30.0 – 44.0)	
<b>Residence</b>		
Urban	61	24.4
Rural	189	75.6
<b>Parity</b>		
None	15	6.0
1	44	17.6
2	68	27.2
3	62	24.8
≥4	61	24.4
<b>Marital status</b>		
Married	193	77.2
Divorced	26	10.4
Widow	31	12.4
<b>Occupation</b>		
Housewife	88	35.2
Employer	87	34.8
Trader	33	13.2
Other	42	16.8
<b>Education</b>		
Primary or illiterate	63	25.2
Secondary	108	43.2
University	79	31.6
<b>History</b>		
	<b>No.</b>	<b>%</b>
<b>Previous surgery</b>		
No	215	86.0
Yes	35	14.0
<b>Level of surgeon</b>		
Consultant	142	56.8
Specialist	18	7.2
Resident	90	36.0
<b>Co-morbid condition</b>		
No	244	97.6
Yes	6	2.4
<b>Indications for hysterectomy</b>		
None	29	11.6
Ovarian tumor	6	2.4
Placenta anomalies	2	0.8
Postpartum haemorrhage	11	4.4
Cancer of the cervix	7	2.8

Cancer of the endometrium	7	2.8
Fibroids	167	66.8
Prolapse	15	6.0
Ruptured uterus	3	1.2
Uterine atony	3	1.2
<b>Operation data</b>	<b>No.</b>	<b>%</b>
<b>Type of operation</b>		
Total	134	53.6
Sub-total	116	46.4
<b>Type of operation</b>		
Vaginal hysterectomy	7	2.8%
Abdominal hysterectomy (16 cesarean hysterectomies)	242	96.8%
Laparoscopic hysterectomy	1	0.4%
<b>Duration of surgery</b>		
<2hours	226	90.4
>2hours	24	9.6
<b>Estimated blood loss</b>		
<200	10	4.0
200-<500	103	41.2
500-<1000	65	26.0
1000-1500	15	6.0
>1500	57	22.8
<b>Complications</b>	<b>No.</b>	<b>%</b>
<b>intra-operative</b>		
Haemorrhage ( $\geq 500\text{ml}$ )	20	8.0
Hematoma	3	1.2
Visceral injury	3	1.2
Vascular injury	0	0.0
Other complications requiring treatment	15	6.0
Intra-operative Blood Transfusion	0	0.0
<b>Post-operative</b>		
Haemorrhage/hematoma	7	2.8
Wound infection	3	1.2
Urinary tract infection	1	0.4
Deep vein thrombosis	3	1.2
Pulmonary embolism	1	0.4
Re-laparotomy within 24hours	7	2.8
Anemia (Hb<8g/dl)	33	13.2
Blood Transfusion	31	12.4

In Ovarian tumor, there is 1 (16.7%) in <30, 3 (50%) in 30-<40, 2 (33.3%) in 40-<50, 0 in ≥50. In Placenta anomalies there is 1 (50%) in <30, 1 (50%) in 30-<40, 0 in 40-<50, 0 in ≥50. In Postpartum haemorrhage there is 2 (18.2%) in <30, 3 (27.3%) in 30-<40, 4 (36.4%) in 40-<50, 2 (18.2%) in ≥50. In Cancer of the cervix, there is 2 (28.6%) in <30, 3 (42.9%) in 30-<40, 2 (28.6%) in 40-<50, 0 in ≥50. In Cancer of the endometrium there is 0 in <30, 4 (57.1%) in 30-<40, 2 (28.6%) in

40-<50, 1 (14.3%) in ≥50. In Fibroids there is 40 (24.0%) in <30, 68(40.7%) in 30-<40, 51 (30.5%) in 40-<50, 8 (4.8%) in ≥50, In Prolapse, there is 1 (6.7%) in <30, 6 (40%) in 30-<40, 6 (40%) in 40-<50, 2 (13.3%) in ≥50, In Ruptured uterus there is 1 (33.3%) in <30, 0 (0%) in 30-<40, 2 (66.7%) in 40-<50, 0 in ≥50, In Uterine atony there is 0 (0%) in <30, 2 (66.7%) in 30-<40, 1 (33.3%) in 40-<50, 0 in ≥50 (Table 2).

**Table (2): Relation between age and Indications for hysterectomy**

Indications for hysterectomy	Age							
	<30 (n = 51)		30 - <40 (n = 103)		40 - <50 (n = 82)		≥50 (n = 14)	
	No.	%	No.	%	No.	%	No.	%
None	3	10.3	13	44.8	12	41.4	1	3.4
Ovarian tumor	1	16.7	3	50.0	2	33.3	0	0.0
Placenta anomalies	1	50.0	1	50.0	0	0.0	0	0.0
Postpartum haemorrhage	2	18.2	3	27.3	4	36.4	2	18.2
Cancer of the cervix	2	28.6	3	42.9	2	28.6	0	0.0
Cancer of the endometrium	0	0.0	4	57.1	2	28.6	1	14.3
Fibroids	40	24.0	68	40.7	51	30.5	8	4.8
Prolapse	1	6.7	6	40.0	6	40.0	2	13.3
Ruptured uterus	1	33.3	0	0.0	2	66.7	0	0.0
Uterine atony	0	0.0	2	66.7	1	33.3	0	0.0
$\chi^2$ (MC p)	21.424 (0.695)							

$\chi^2$ : Chi square test, MC: Monte Carlo

p: p value for association between different categories

There is no significant difference between different types of operations As regards Preoperative Complications Haemorrhage ( $\geq 500\text{ml}$ ), Hematoma, Visceral injury, Vascular injury, Other complications requiring treatment, Intra-operative Blood Transfusion, and Post-

operative complications Haemorrhage/hematoma, Wound infection, Urinary tract infection, Deep vein thrombosis, Pulmonary embolism, Re-laparotomy within 24hours, Anemia ( $\text{Hb} < 8\text{g/dl}$ ), Blood Transfusion (**Table 3**).

**Table (3): Relation between type of operation and Indications for complications**

Complications)	Type of operation				$\chi^2$	MC p
	Hysterectomy (sub-total) (n =116)		Hysterectomy (total) (n =134)			
	No.	%	No.	%		
<b>Preoperative</b>						
Haemorrhage ( $\geq 500\text{ml}$ )	7	6.03	11	8.21	0.44	0.5071
Hematoma	2	1.72	1	0.75	0.5015	0.4789
Visceral injury	2	1.72	1	0.75	0.5015	0.4789
Vascular injury	0	0.0	0	0.0	–	–
	7	6.03	7	5.22	0.07728	0.7810
Intra-operative Blood Transfusion	0	0.0	0	0.0	–	–
<b>Post-operative</b>						
Haemorrhage/hematoma	3	2.58	3	2.38	0.03203	0.8580
Wound infection	2	1.72	1	0.75	0.5015	0.4789
Urinary tract infection	0	0.0	1	0.75	0.8691	0.3512
Deep vein thrombosis	0	0.0	3	2.38	2.629	0.1050
Pulmonary embolism	0	0.0	1	0.75	0.8691	0.3512
Re-laparotomy within 24hours	5	4.31	1	0.75	3.372	0.06633
Anemia ( $\text{Hb} < 8\text{g/dl}$ )	12	10.34	20	14.93	1.169	0.2809
Blood Transfusion	13	11.21	18	13.43	0.2836	0.5943

$\chi^2$ : Chi square test, MC: Monte Carlo  
 p: p value for association between different categories

**DISCUSSION**

Hysterectomy is the removal of uterus and it is the commonest major surgical procedure performed in gynecology. It can be done by abdominal or vaginal route and with help of laparoscopy. Hysterectomy is the effective treatment option for many conditions like fibroid, abnormal uterine bleeding, endometriosis, adenomyosis, uterine prolapse, pelvic inflammatory disease and in some cases of genital tract malignancies. Lifetime risk of hysterectomy ranges from 30-40%. 3 Rate

of hysterectomy vary with geographic area, patient expectations, and training and practice patterns of local gynecological surgeons (*Li and Ding, 2018*).

Despite these issues, few studies were found to assess the attitude and practice of gynecologists towards the route of hysterectomy plus the factors affecting surgeon's choice of hysterectomy type. In Egypt, no statistics were found to address the prevalence of both types of hysterectomy among Egyptian

gynecologists and the factors affecting their preference of one type over the other (Dawood *et al.*, 2019).

The aim of this study is to present an updated assessment for incidence, indications, complications and types of hysterectomy from the available data about the patients at El-Tahrir general hospital (Imbaba) and compare the results of this thesis to the worldwide results.

In this study we shows that there are 51(20.4%) <30, 103(41.2%)30-40, 82(32.8%) 40- <50, 14(5.6%) ≥50, the mean of age 37.01(± 37.0 SD), there are 61(24.4%) Urban, 189(75.6%) Rural, 44(17.6%) with 1 parity, 68(27.2%) wit 2 parity, 62(24.8%) with 3 parity, 61(24.4%) with ≥4 parity, there are 193(77.2%) married, 26(10.4%) Divorced, 31(12.4%) widow, there are 88(35.2%) housewife, 87(34.8%) Employer, 33(13.2%) Trader, 42(16.8%) other, there are 63(25.2%) in Primary or illiterate education, 108(43.2%) in secondary education, 79(31.6%) in university.

Dawood *et al.* (2019) found that there are 50.6% <48, 49.4% more than 48, there are 51.2% Urban, 48.8% Rural. According to level of education, there were 44.8% with Diploma, 38.4% with Master and 16.9% with Medical Doctor.

Takyi (2015) showed that more than half of the patients had at least primary level of education (95.0%) with only a little over 2.0% having no education at all. He showed that 16.8% with 1 parity, 21.8% wit 2 parity, 21.9% with 3 parity, 26.9% with ≥4 parity.

Takyi (2015) also showed that there are 80.4% married, 4.2% Divorced, 3% widow. According to occupation, he

found that there is 36.7% self-employer, 17.9% Trader, 0.9% farmer.

In this study we found that there are 35 (14%) had pervious surgery, and according to level of surgeon there are 142 (56.8%) Consultant, 18 (7.2%) Specialist, 90 (36%) Resident, there are 6 (24%) Co-morbid condition, according to indications for hysterectomy, 6 (2.4%) Ovarian tumor, 2 (0.8%) Placenta anomalies, 11 (4.4%) Postpartum haemorrhage, 7 (2.8%) Cancer of the cervix, 7 (2.8%) Cancer of the endometrium, 167 (66.8%) Fibroids, 15 (6%) Prolapse, 3 (1.2%) Ruptured uterus, 3 (1.2%) Uterinetony.

Takyi (2015) showed that the Indications for hysterectomy were many and varied. The prevalence of the various indications, in descending order is as follows: uterine fibroids 1406(67.3%), utero-vaginal prolapse 88(4.2%), ovarian tumor 84(4.0%), ruptured uterus 57(2.7%), cancer of the endometrium 54(2.6%), postpartum hemorrhage (PPH) 46(2.2%), hemorrhage 27(1.3%), uterine atony 25(1.2%), placenta anomalies 22(1.1%) and cancer of the cervix 18(0.9%). Other indications were adenomyosis, endometriosis, endometrial hyperplasia, post-menopausal bleeding, and septic abortions with gangrenous uterus, abdominal pregnancy and molar pregnancy.

Takyi (2015) showed that according to level of surgeon there are 15.1% was Consultant, 47.1% was Specialist, 41.6% Resident.

Sivapragasam *et al.* (2018) showed that most common indication was abnormal uterine bleeding. This is comparable to studies conducted by



*Perveen S et al. (2014)* and *Sharma C et al. (2014)*. Next common indication was leiomyoma. Third common indication was abnormal uterine bleeding with leiomyoma. Other indications were uterovaginal prolapse in 31 cases (16%), benign ovarian cyst in 13 cases (7%), and cervical dysplasia in 10 cases (5%).

*Pandey et al. (2014)* found that most common indication for hysterectomy was symptomatic fibroid uterus 39.9%, followed by uterovaginal prolapse 16.3%. Other indications being dysfunctional uterine bleeding (DUB) 8.1%, adenomyosis 3.9%, endometriosis 1.3%, benign 7.9% and malignant 8.9% ovarian tumors, endometrial hyperplasia 4.7% and endometrial cancer 3.7%, premalignant disease of cervix 3.2%, and early stage cervical cancer 0.7%. Less common indications were recurrent postmenopausal bleeding of undetermined cause 2.8% and chronic pelvic inflammatory disease (PID) 1.5%. Obstetric hysterectomy was performed in 8 (1.5%) cases

In this study we cleared that operation data according to type of operation, there are 2 (0.8%) Hysterectomy (caesarean-hysterectomy), 111 (44.4%) Hysterectomy (sub-total), 129 (51.6%) Hysterectomy (total), 1 (0.4%) Laparoscopic hysterectomy, 7 (2.8%) Vaginal hysterectomy, according duration of surgery there are 226 (90.4%) <2hours, 24 (9.6%) >2hours, according to Estimated blood loss there are 10 (4%) <200, 103 (41.2%) 200-<500, 65 (26%) 500-<1000, 15(6%) 1000-1500, 57 (22.8%) >1500.

*Takyi (2015)* showed that according duration of surgery there are 14.4% <2hours, 30.9% >2hours. According to

Estimated blood loss there are 12.5% was <200, 21.3% was 200-<500, 86.0% was 500-<1000, 94.1% was 1000-1500, 90.7% was >1500.

*Takyi (2015)* also showed that 65.3 % with Hysterectomy (sub-total), 15.3% with Hysterectomy (total), 5.8% Vaginal hysterectomy.

*Pandey et al. (2014)* showed that most common surgical approach was abdominal 74.7%, followed by vaginal 17.8%, and laparoscopic 6.6%.

*Sivapragasamet al. (2017)* showed that majority of hysterectomies were done through abdominal route, 162 cases (82%). Remaining 36 cases were done by vaginal route. Among abdominal hysterectomies, Total abdominal hysterectomy with bilateral salphingo oophorectomy was found common, 103 cases (52%). Total abdominal hysterectomy with unilateral salphingo oophorectomy was done in 35 cases (18%). Vaginal hysterectomy with pelvic floor repair was done in 29 cases (15%). Vaginal hysterectomy without pelvic floor repair was done in 2 cases.

*Sivapragasam et al. (2017)* showed that most common type of hysterectomy done was total abdominal hysterectomy with bilateral salphingo oophorectomy. Similar observation was made in studies conducted by *Verma et al. (2016)*.

In this study we illustrated that according to pre-operative complications there are 20 (8%) Haemorrhage ( $\geq 500$ ml), 3 (1.2%) Hematoma, 3 (1.2%) Visceral injury, there is no Vascular injury, 15 (6%) Other complications requiring treatment and shows that according to post-operative complications there are 7

(2.8%) haemorrhage/hematoma, 3 (1.2%) wound infection, 1 (0.4%) urinary tract infection, 3 (1.2%) deep vein thrombosis, 1 (0.4%) pulmonary embolism, 7 (2.8%) re-laparotomy within 24hours, 33 (13.2%) anemia (Hb<8g/dl), 31 (12.4%) blood Transfusion.

*Takyi (2015)* also showed that 0.1% with Wound infection, 0.1% Urinary tract infection, 0.2% Deep vein thrombosis, 0.1% Pulmonary embolism, 0.6% Re-laparotomy within 24 hours.

In this study we demonstrated that In Ovarian tumor there is 1 (16.7%) in <30, 3 (50%) in 30-<40, 2 (33.3%) in 40-<50, 0 in  $\geq 50$ . In Placenta anomalies there is 1 (50%) in <30, 1 (50%) in 30-<40, 0 in 40-<50, 0 in  $\geq 50$ . In Postpartum haemorrhage there is 2 (18.2%) in <30, 3 (27.3%) in 30-<40, 4 (36.4%) in 40-<50, 2 (18.2%) in  $\geq 50$ . In Cancer of the cervix, there is 2 (28.6%) in <30, 3 (42.9%) in 30-<40, 2 (28.6%) in 40-<50, 0 in  $\geq 50$ . In Cancer of the endometrium there is 0 in <30, 4 (57.1%) in 30-<40, 2 (28.6%) in 40-<50, 1 (14.3%) in  $\geq 50$ . In Fibroids there is 40 (24.0%) in <30, 68(40.7%) in 30-<40, 51 (30.5%) in 40-<50, 8 (4.8%) in  $\geq 50$ , In Prolapse , there is 1 (6.7%) in <30, 6 (40%) in 30-<40, 6 (40%) in 40-<50, 2 (13.3%) in  $\geq 50$ , In Ruptured uterus there is 1 (33.3%) in <30, 0 (0%) in 30-<40, 2 (66.7%) in 40-<50, 0 in  $\geq 50$ , In Uterine atony there is 0 (0%) in <30, 2 (66.7%) in 30-<40, 1 (33.3%) in 40-<50, 0 in  $\geq 50$ . There is No significant Relation between age and Indications for hysterectomy

*Al-Hammamiet al. (2019)* found 2304 cases of hysterectomy in our study divided to 533 cases in the age group (18-35), 747 cases in the age group (36-48) and 1024 cases in the age group (49-65). In the age

group (18-35), the rate of indications for hysterectomy were 5% leiomyomas, 0% uterine prolapse, 2% cervical dysplasia, 1% cervical cancer, 3% Abnormal uterine bleeding, 0% Uterine corpus cancer, 3% ovarian cysts, 1% ovarian tumors, 1% chorionic cancer, 8% adenomyosis, 3% uterine rupture, 24% Uterine inertia, 49% Placenta previa. In the age group (36-48) the rate of indications for hysterectomy were 23% leiomyomas, 2% uterine prolapse, 5% cervical dysplasia, 2% cervical cancer, 13% Abnormal uterine bleeding, 3% Uterine corpus cancer, 9% ovarian cysts, 7% ovarian tumors, 1% chorionic cancer, 27% adenomyosis, 0% uterine rupture, 3% Uterine inertia, 5% Placenta previa. In the age group (49-65), the rate of indications for hysterectomy were 5% leiomyomas, 7% uterine prolapse, 9% cervical dysplasia, 5% cervical cancer, 32% Abnormal uterine bleeding, 3% Uterine corpus cancer, 7% ovarian cysts, 9% ovarian tumors, 2% chorionic cancer, 21% adenomyosis, 0% uterine rupture, 0% Uterine inertia, 0% Placenta previa.

In this study we show that there is No significant difference between age groups as regard Parity.

*Sivapragasamet al. (2017)* showed that five patients were nulliparous, out of them four cases were between 41-50 years. One patient was 37 years old, unmarried, with intra operative finding of huge fundal fibroid distorting the anatomy; hence proceeded with hysterectomy.

*Sivapragasamet al. (2017)* showed that there was highly significant association between age and Parity.

In this study we found that there is no significant difference between different

types of operations As regards Preoperative Complications Haemorrhage ( $\geq 500\text{ml}$ ), Hematoma, Visceral injury, Vascular injury, Other complications requiring treatment, Intra-operative Blood Transfusion, and Post-operative complications Haemorrhage/hematoma, Wound infection, Urinary tract infection, Deep vein thrombosis, Pulmonary embolism, Re-laparotomy within 24hours, Anemia ( $\text{Hb} < 8\text{g/dl}$ ), Blood Transfusion.

### CONCLUSION

As any surgical procedure, hysterectomy is also associated with complications during and after surgery. Therefore, the indication for hysterectomy should be carefully evaluated. Hence reporting of all hysterectomies should be made mandatory so that the audit results can be used for improvement in the quality of health services.

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## مسح للمؤشرات والأسباب والمضاعفات وأنواع عملية استئصال الرحم في مستشفى التحرير العام بامبابية خلال الفترة ٢٠١٩

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**خلفية البحث:** يعتبر استئصال الرحم من أكثر العمليات الجراحية شيوعاً للنساء، وقد كان قيد المناقشة منذ سبعينيات القرن الماضي بسبب الاختلافات الإقليمية والدولية في الوقوع، والمؤشرات، والطرق الجراحية.

**الهدف من البحث:** تقديم تقييم محدث لحدوث ودواعي ومضاعفات وأنواع استئصال الرحم من البيانات المتوفرة حول المرضى في مستشفى التحرير العام (إمبابية) ومقارنة نتائج هذه الرسالة بنتائج الابحاث الاخرى على مستوى العالم.

**المريضات وطرق البحث:** تمت هذه الدراسة بأثر رجعي في قسم أمراض النساء والولادة بمستشفى التحرير العام على ٢٥٠ امرأة تحت إشراف قسم أمراض النساء والتوليد بكلية الطب بجامعة الأزهر من أغسطس ٢٠١٩ حتى ديسمبر.

**نتائج البحث:** بيانات العملية حسب نوع العملية، هناك ١٦ (٦.٤٪) استئصال الرحم (عملية قيصرية+استئصال الرحم)، ١١٦ (٤٦.٤٪) استئصال الرحم (غير كلي)، ١٣٤ (٥٣.٦٪) استئصال الرحم (كلي)، ١ (٠.٤٪) بالمنظار استئصال الرحم، ٧ (٢.٨٪) استئصال الرحم المهبلي، حسب مدة الجراحة ٢٢٦ (٩٠.٤٪) أقل من ساعتين، ٢٤ (٩.٦٪) > ساعتان.

**الاستنتاج:** مثل أي إجراء جراحي، يرتبط استئصال الرحم أيضاً بمضاعفات أثناء الجراحة وبعدها. لذلك، يجب تقييم إشارة استئصال الرحم بعناية. ومن ثم، يجب أن يكون الإبلاغ عن جميع عمليات استئصال الرحم إلزامياً حتى يمكن استخدام نتائج التدقيق لتحسين جودة الخدمات الصحية.

**الكلمات الدالة:** استئصال الرحم البطني، المضاعفات، استئصال الرحم بالمنظار، المؤشرات، استئصال الرحم عن طريق المهبل.