Al-Nahrain University
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Causes and indications of hysterectomy in AL-Kadhymia teaching hospital

Research submitted to department of Gynaecology /college of medicine/ AL-Nahrain University as part of M.B.CH.B graduation requirement

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FICMS

2019


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Acknowledgement

I would like to acknowledge this humble work to my supervisor Dr. Sara for her continuous support, advice and supervision.

My sincere regard to the Gynaecology department in Al-Kadhmyiah teaching hospital for their hard work and continuous patience preparing us for the medical life.

I also give my gratitude to my family who stood beside me all the way through my life.

Table of contents

Abstract ……..4
Introduction ……5
Aim of study ……16
Materials and methods ……..17
Questionnaire sheet ……...18
Results ……20
Discussion ……...27
Conclusions……..……..30
Recommendation……31
References……...……...32

Abstract

Background:

Hysterectomy is a safe and a major gynecological operation. It could be performed using abdominal, vaginal, or laparoscopic approach. It is performed for different indications such as dysfunctional uterine bleeding, endometriosis, fibroids, or prolapse. This procedure is however not without complications especially in resource-poor countries. An overview of the outcome of the procedure is essential in facilities like ours that is located in resource-poor countries.

Methodology:

This was a cross sectional study of all cases of hysterectomies performed over a 6-month's period (October 2018 to March 2019) at Al- Khadimia teaching Hospital. Outcome measures were demographic characteristics, indication for surgery, type of hysterectomy, and postoperative complications.

Results:

During the period of study, there were 2321 major gynecological operations, among them were 187 cases of elective & emergency hysterectomy, giving a rate of 8,1%. The most common indication was uterine fibroid (36.25%). Total abdominal hysterectomy (TAH) was more commonly performed (93.8%) compared to subtotal hysterectomy (6.2%). Postoperative wound infection (16.2%) was the most common complication for elective hysterectomy, while bladder injury (40.7%) was the most common complication for emergency hysterectomy. Duration of hospital stay was <7 in100% of elective & 85.2% of cases, and there was no mortality recorded.

Conclusion:

Hysterectomy is a fairly common and safe procedure in Al- Khadimia teaching Hospital. Uterine fibroid and postoperative wound infection was the most common indication and complication, respectively. TAH was commonly performed compared to subtotal hysterectomy

Introduction

A **hysterectomy** (from Greek ὑστέρα *hystera* "womb" and εκτομία *ektomia* "a cutting out of") is the surgical removal of the uterus, usually performed by a gynecologist. Hysterectomy may be total (removing the body, fundus, and cervix of the uterus; often called "complete") or partial (removal of the uterine body while leaving the cervix intact; also called "supracervical"). It is the most commonly performed gynecological surgical procedure. In 2003, over 600,000 hysterectomies were performed in the United States alone, of which over 90% were performed for benign conditions.[1] Such rates being highest in the industrialized world has led to the major controversy that hysterectomies are being largely performed for unwarranted and unnecessary reasons.[2]

Removal of the uterus renders the patient unable to bear children (as does removal of ovaries and fallopian tubes) and has surgical risks as well as long-term effects, so the surgery is normally recommended when other treatment options are not available. It is expected that the frequency of hysterectomies for non-malignant indications will fall as there are good alternatives in many cases. [3]

Oophorectomy (removal of ovaries) was frequently done together with hysterectomy to decrease the risk of ovarian cancer, however it is now clear that prophylactic oophorectomy without an urgent medical indication decreases long-term survival rates substantially and has other serious adverse effects [4] This effect is not limited to premenopausal women, and a negative impact on survival is expected even for oophorectomy up to an age of 65 years. [5]

Some women's health education groups such as the Hysterectomy Educational Resources and Services (HERS) Foundation seek to inform the public about the many consequences and alternatives to hysterectomy, and the important functions that the female organs have all throughout a woman's life.

Incidence of hysterectomy

Canada

In Canada, the number of hysterectomies between 2008 and 2009 was almost 47,000. The national rate in for the same timeline was 338 per 100,000 population, down from 484 per 100,000 in 1997. The reasons for hysterectomies differed depending on whether the woman was living in

an urban or rural location. Urban women most common reason was due to uterine fibroids and rural women had hysterectomies mostly for menstrual disorders.[6]

United States

According to the National Center for Health Statistics, of the 617,000 hysterectomies performed in 2011, 73% also involved the surgical removal of the ovaries. In the United States, 1/3 of women can be expected to have a hysterectomy by age 60.[7] There are currently an estimated 22 million people in the United States who have undergone this procedure. An average of 622,000 hysterectomies a year have been performed for the past decade.[7]

United Kingdom

In the UK, one in 5 women is likely to have a hysterectomy by age 60, and ovaries are removed in about 20% of hysterectomies.[8]

Indications of Hysterectomy

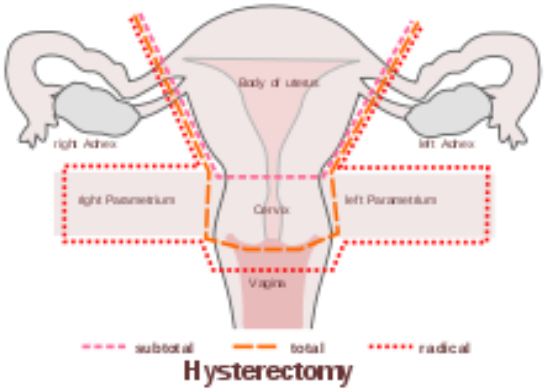
Hysterectomy is a major surgical procedure that has risks and benefits, and affects a woman's hormonal balance and overall health for the rest of her life. Because of this, hysterectomy is normally recommended as a last resort to remedy certain intractable uterine/reproductive system conditions. Such conditions include, but are not limited to:

- Certain types of reproductive system cancers (uterine, cervical, ovarian, endometrium) or tumors.[9]
- Severe and intractable endometriosis (growth of the uterine lining outside the uterine cavity) and/or adenomyosis (a form of endometriosis, where the uterine lining has grown into and sometimes through the uterine wall musculature), after pharmaceutical or other surgical options have been exhausted.[9]
- Chronic pelvic pain, after pharmaceutical or other surgical options have been exhausted.[9]
- Postpartum to remove either a severe case of placenta praevia (a placenta that has either formed over or inside the birth canal) or placenta percreta (a placenta that has grown into and through the wall of the uterus to attach itself to other organs), as well as a last resort in case of excessive obstetrical hemorrhage.[10]
- For uterine fibroids when conservative treatment fails.[9]
- Several forms of vaginal prolapse.[9]

Occasionally, women will express a desire to undergo an elective hysterectomy--that is, a hysterectomy for reasons other than the resolution of reproductive system conditions or illnesses. Some of the conditions under which a woman may request to have a hysterectomy (or have one requested for her if the woman is incapable of making the request) for non-illness reasons include:

- Prophylaxis against certain reproductive system cancers, especially if there is a strong family history of reproductive system cancers (especially breast cancer in conjunction with BRCA1 or BRCA2 mutation), or as part of recovery from such cancers.
- Part of overall gender transition for transmen.[11]
- Severe developmental disabilities, though this treatment is controversial at best, and specific cases of sterilization due to developmental disabilities have been found by state-level Supreme Courts to violate the patient's constitutional and common law rights.[12]

Types of hysterectomy



Schematic drawing of types of hysterectomy

Hysterectomy in the literal sense of the word means merely removal of the uterus, however other organs such as ovaries, fallopian tubes and the cervix are very frequently removed as part of the surgery.

- Radical hysterectomy: complete removal of the uterus, cervix, upper vagina, and parametrium. Indicated for cancer. Lymph nodes, ovaries and fallopian tubes are also usually removed in this situation.
- Total hysterectomy: Complete removal of the uterus and cervix.
- Subtotal hysterectomy: removal of the uterus, leaving the cervix in situ.

Many women want to retain the cervix believing that it may affect sexual satisfaction after hysterectomy. It has been postulated that removing the cervix causes excessive neurologic and anatomic disruption, thus leading to vaginal shortening, vaginal vault prolapse, and vaginal cuff granulations. These issues were addressed in a systematic review of total versus supracervical hysterectomy for benign gynecological conditions, which reported the following findings [13]:

- There was no difference in the rates of incontinence, constipation or measures of sexual function.
- Length of surgery and amount of blood lost during surgery were significantly reduced during supracervical hysterectomy compared to total hysterectomy, but there was no difference in post-operative transfusion rates.
- Febrile morbidity was less likely and ongoing cyclic vaginal bleeding one year after surgery was more likely after supracervical hysterectomy.
- There was no difference in the rates of other complications, recovery from surgery, or readmission rates.

In the short-term, randomized trials have shown that cervical preservation or removal does not affect the rate of subsequent pelvic organ prolapse.[14] However, no trials to date have addressed the risk of pelvic organ prolapse many years after surgery, which may differ after total versus supracervical hysterectomy. It is obvious that supracervical hysterectomy does not eliminate the possibility of having cervical cancer since the cervix itself is left intact. Those who have undergone this procedure must still have regular Pap smears to check for cervical dysplasia or cancer.

Technique

Hysterectomy can be performed in different ways. The oldest known technique is abdominal incision. Subsequently the vaginal (performing the hysterectomy through the vaginal canal) and later laparoscopic vaginal (with additional instruments inserted through a small hole, frequently close to the navel) techniques were developed.

Most hysterectomies in the United States are done via laparotomy (abdominal incision, not to be confused with laparoscopy). A transverse (Pfannenstiel) incision is made through the abdominal wall, usually above the pubic bone, as close to the upper hair line of the individual's lower pelvis as possible, similar to the incision made for a caesarean section. This technique allows doctors the greatest access to the reproductive

structures and is normally done for removal of the entire reproductive complex. The recovery time for an open hysterectomy is 4–6 weeks and sometimes longer due to the need to cut through the abdominal wall. Historically, the biggest problem with this technique were infections, but infection rates are well-controlled and not a major concern in modern medical practice. An open hysterectomy provides the most effective way to explore the abdominal cavity and perform complicated surgeries. Before the refinement of the vaginal and laparoscopic vaginal techniques it was also the only possibility to achieve subtotal hysterectomy, meanwhile any of the techniques can be used for subtotal hysterectomy.

Vaginal hysterectomy is performed entirely through the vaginal canal and has clear advantages over abdominal surgery such as less complications, shorter hospital stays and shorter healing time. Abdominal hysterectomy, the most common method, is used in cases such as after caesarean delivery, when the indication is cancer, when complications are expected or surgical exploration is required.

With the development of the laparoscopic techniques in the 1970-1980s, the "laparoscopic-assisted vaginal hysterectomy" (LAVH) has gained great popularity among gynecologists because compared with the abdominal procedure it is less invasive and the post-operative recovery is much faster. It also allows better exploration and slightly more complicated surgeries then the vaginal procedure. LAVH begins with laparoscopy and is completed such that the final removal of the uterus (with or without removal of the ovaries) is via the vaginal canal. Thus, LAVH is also a total hysterectomy, the cervix must be removed with the uterus. Total laparoscopic hysterectomy (TLH) is more advanced than an LAVH and does not require a double-setup, laparoscopic and vaginal.

The "laparoscopic-assisted supracervical hysterectomy" (LASH) was later developed to remove the uterus without removing the cervix using a morcellator which cuts the uterus into small pieces that can be removed from the abdominal cavity via the laparoscopic ports.

Total laparoscopic hysterectomy (TLH) is performed solely through the laparoscopes in the abdomen, starting at the top of the uterus. The entire uterus is disconnected from its attachments using long thin instruments through the "ports". Then all tissue to be removed is passed through the small abdominal incisions.

Supracervical (subtotal) laparoscopic hysterectomy (LSH) is performed similar to the total laparoscopic surgery but the uterus is amputated between the cervix and fundus.

"Robotic hysterectomy" is a variant of laparoscopic surgery using special remotely controlled instruments that allow the surgeon finer control as well as three-dimensional magnified vision.[15]

- 

  uterus before hysterectomy

- 

  laparoscopical hysterectomy

- 

  transvaginal extraction of the uterus in total laparoscopical hysterectomy

- 

  cervical stump (white) after removement of the uterine corpus at laparoscopic supracervical hysterectomy

- 

  end of an laparoscopical hysterectomy

Comparison of techniques

The abdominal technique is very often applied in difficult circumstances or when complications are expected. Given this circumstances the complication rate and time required for surgery compares very favorably with other techniques, however time required for healing is much longer.

Vaginal hysterectomy was shown to be superior to LAVH and some types of laparoscopic surgery (sufficient data was not available for all types of laparoscopic surgery), causing fewer short- and long-term complications, more favorable effect on sexual experience with shorter recovery times and fewer costs.[16][17][18] It is however not possible or very difficult to perform some more complicated surgeries using this technique.

A recent Cochrane review recommends vaginal hysterectomy over other variants where possible. Laparoscopic surgery offers certain advantages when vaginal surgery is not possible but has also the disadvantage of significantly longer time required for the surgery.[19]

In direct comparison of abdominal (laparotomic) and laparoscopic techniques laparoscopic surgery causes longer operation time and substantially higher rate of major complications while offering much quicker healing.[19][20]

Vaginal hysterectomy is the only available option that is feasible without total anesthesia or in outpatient settings (although so far recommended only in exceptional cases).

Time required for completion of surgery in the eVAL trial is reported as following:[20]

- abdominal 55.2 minutes average, range 19-155
- vaginal 46.6 minutes average, range 14-168
- laparoscopic (all variants) 82.5 minutes average, range 10-325 (combined data from both trial arms)

Large multifibroid uteri and subtotal hysterectomies did previously require abdominal incision but with the use of in situ morcellation they can be sometimes also performed using laparoscopic or vaginal techniques.[21] Even impacted fibroid uteri with severe adhesions, oblitered cul-de-sac and no motion whatsoever on pelvic exam can be removed laparoscopically by experienced laparoscopic surgeons.[22] An advanced laparoscopist can replace the majority of inpatient total

abdominal hysterectomies performed for benign indications with outpatient total laparoscopic hysterectomy.[23]

Non-robotic laparoscopic hysterectomy has a higher likelihood a requiring a large incision and conversion to open technique than robotic hysterectomy. In addition blood loss and duration of hospital stay were lower when using robotic technique when compared to non-robotic laparoscopic hysterectomy.[24]

The other techniques are not long enough in use to allow a general assessment, it appears that laparoscopic subtotal hysterectomy (LSH) is a promising technique.[17]

Risks and side effects

Hysterectomy has like any other surgery certain risks and side effects.

Mortality and surgical risks

Short term mortality (within 40 days of surgery) is usually reported in the range of 1-6 cases per 1000 when performed for benign causes. Risks for surgical complications are presence of :

1. Fibroids
2. Younger age (vascular pelvis with higher bleeding risk and larger uterus),
3. Dysfunctional uterine bleeding and
4. Parity.[25]

The mortality rate is several times higher when performed in patients that are pregnant, have cancer or other complications.[26]

Long term effect on all case mortality is relatively small. Women under the age of 45 years have a significantly increased long term mortality that is believed to be caused by the hormonal side effects of hysterectomy and prophylactic oophorectomy.[27]

Approximately 35% of women after hysterectomy undergo another related surgery within 2 years.

Reconvalescence

Hospital stay is 3 to 5 days or more for the abdominal procedure and between 2 to 3 days for vaginal or laparoscopically assisted vaginal procedures.

Time for full recovery is very long and independent on the procedure that was used. Depending on the definition of "full recovery" 6 to 12 months have been reported. Serious limitations in everyday activities are expected for a minimum of 4 months.

Unintended oophorectomy and premature ovarian failure

Removal of one or both ovaries is performed in a substantial number of hysterectomies that were intended to be ovaries sparing.[28]

The average onset age of menopause in those who underwent hysterectomy is 3.7 years earlier than average even when the ovaries are preserved.[29] This has been suggested to be due to the disruption of blood supply to the ovaries after a hysterectomy or due to missing endocrine feedback of the uterus. The function of the remaining ovaries is significantly affected in about 40% women, some of them even require hormone replacement treatment. Surprisingly, a similar and only slightly weaker effect has been also observed for endometrial ablation which is often considered as an alternative to hysterectomy.

Substantial number of women develop benign ovarian cysts after hysterectomy.[30]

Premature menopause and its effects

Estrogen levels fall sharply when the ovaries are removed, removing the protective effects of estrogen on the cardiovascular and skeletal systems. This condition is often referred to as "surgical menopause", although it is substantially different from a naturally occurring menopausal state; the former is a sudden hormonal shock to the body that causes rapid onset of menopausal symptoms such as hot flashes, while the latter is a gradually occurring decrease of hormonal levels over a period of years with uterus intact and ovaries able to produce hormones even after the cessation of menstrual periods.

When only the uterus is removed there is a three times greater risk of cardiovascular disease. If the ovaries are removed the risk is seven times greater. Several studies have found that osteoporosis (decrease in bone

density) and increased risk of bone fractures are associated with hysterectomies.[31][32][33][34][35][36] This has been attributed to the modulatory effect of estrogen on calcium metabolism and the drop in serum estrogen levels after menopause can cause excessive loss of calcium leading to bone wasting.

Hysterectomies have also been linked with higher rates of heart disease and weakened bones. Those who have undergone a hysterectomy with both ovaries removed typically have reduced testosterone levels as compared to those left intact.[28] Reduced levels of testosterone in women is predictive of height loss, which may occur as a result of reduced bone density,[37] while increased testosterone levels in women are associated with a greater sense of sexual desire.[38]

Oophorectomy before the age of 45 is associated with a fivefold mortality from neurologic and mental disorders.[39]

Urinary incontinence and vaginal prolapse

Urinary incontinence and vaginal prolapse are well known adverse effects that develop with high frequency very long time after the surgery. Typically those complications develop 10–20 years after the surgery.[40] For this reason exact numbers are not known and risk factors poorly understood, it is also unknown if the choice surgical technique has any effect. It has been assessed that the risk for urinary incontinence is approximately doubled within 20 years after hysterectomy. One long term study found a 2.4 fold increased risk for surgery to correct urinary stress incontinence following hysterectomy [41][42]

The risk for vaginal prolapse depends on factors such as number of vaginal deliveries, the difficulty of those deliveries, and the type of labor the individual does.[43] Overall incidence is approximately doubled after hysterectomy. [44]

Effects on social life and sexuality

Some women find their natural lubrication during sexual arousal is also reduced or eliminated. Those who experience uterine orgasm will not experience it if the uterus is removed. The vagina is shortened and made into a closed pocket and there is a loss of support to the bladder and bowel.

Other rare problems

Hysterectomy may cause an increased risk of the relatively rare renal cell carcinoma. Hormonal effects or injury of the ureter were considered as possible explanations.[45][46]

Removal of the uterus without removing the ovaries can produce a situation that on rare occasions can result in ectopic pregnancy due to an undetected fertilization that had yet to descend into the uterus before surgery. Two cases have been identified and profiled in an issue of the *Blackwell Journal of Obstetrics and Gynecology*; over 20 other cases have been discussed in additional medical literature.[47]

:

Heavy bleeding

Levonorgestrel intrauterine devices are highly effective at controlling dysfunctional uterine bleeding or menorrhagia and should be considered before any surgery.[48]

Menorrhagia (heavy or abnormal menstrual bleeding) may also be treated with the less invasive endometrial ablation which is an outpatient procedure in which the lining of the uterus is destroyed with heat, mechanically or by radio frequency ablation. Endometrial ablation will greatly reduce or entirely eliminate monthly bleeding in ninety percent of patients with DUB. It is not effective for patients with very thick uterine lining or uterine fibroids.[49]

Aim of study

This cross section study aim to define Causes and indications of hysterectomy in AL-Kadhymia teaching hospital.

Patients and Methods

We retrospectively analysed a series of 187cases of Elective and Emergency Hysterectomy between October 2018 and March 2019 at Alkadhmia hospital

The data were collected from the patients' themselves and their files. Mean maternal age, gravidity, parity, types of previous delivery risk factors, and outcomes of hysterectomies were determined. Peripartum maternal complications and causes of maternal mortality were evaluated. The surgical procedures, type of anaesthesia and hysterectomy, complications, the operative complications, amount of blood transfused were taken. The main complications included massive haemorrhage, infection, bladder injury, ureter injury.

Age_____ **grvida**_____ **para**

.

Cause of hysterectomy_____.

ANC or not yes no

GA_____.

Mode of previous delivery vaginal C/S

Cinical characteristic of pt

.

Preoperative Hb befor surgery_____.

Post-operative Hb_____.

Intra-operative fluid transfused yes no

No. of intraoperative blood transfusion_____.

ICU stay _____ day.

Duration of hospital stay _____ day.

Type of surgery elective emergency

Post-operative complication:	**present / absent**
1. Febrile morbidity	
2. Bladder injury	
3. Bowel injury	
4. Wound infection	
5. DIC	
6. Renal failure	
7. Maternal death	
8. Pelvic collection	
9. Re-laprotomy	

Associated complication: **yes / no**

1. Rh –ve
2. DM
3. PIH
4. SEPSIS
5. heart disease

Type of hysterectomy total subtotal / Abdominal vaginal

The results

Table 1: incidence of hysterectomy in gynecological department.

total surgery number	2321
total hysterectomy number	187
incidence	8.10%

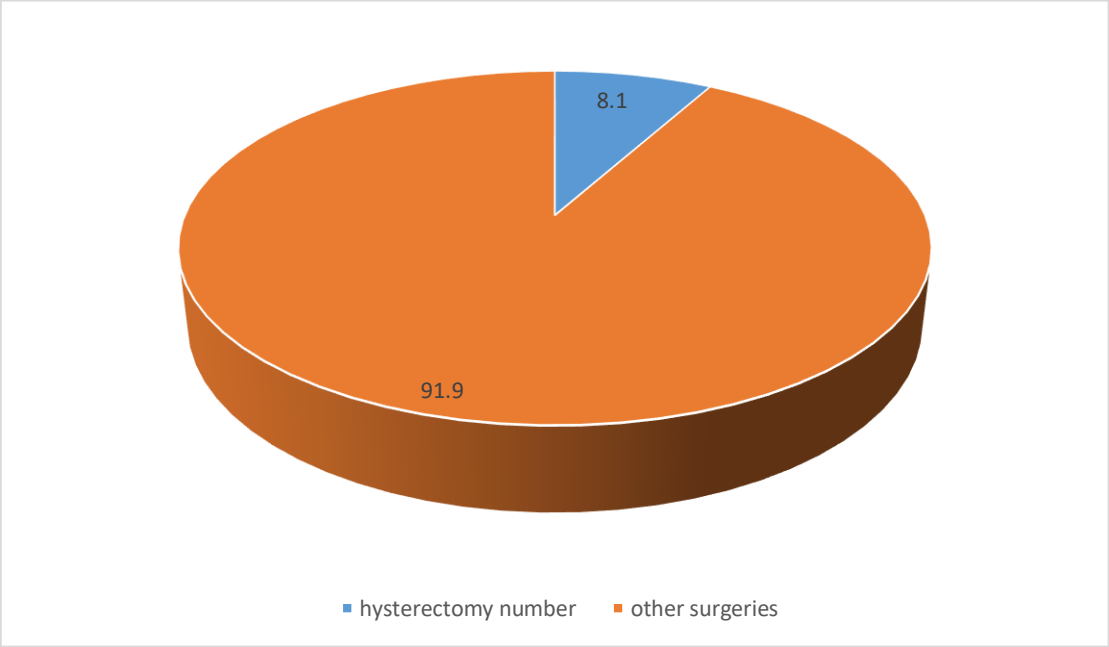


Chart1: incidence of hysterectomy in gynecological department.

Table 2: number of elective and emergency hysterectomy.

	emergency	elective	total
number of cases	28	162	190
percentage	14.73%	85.27%	100%

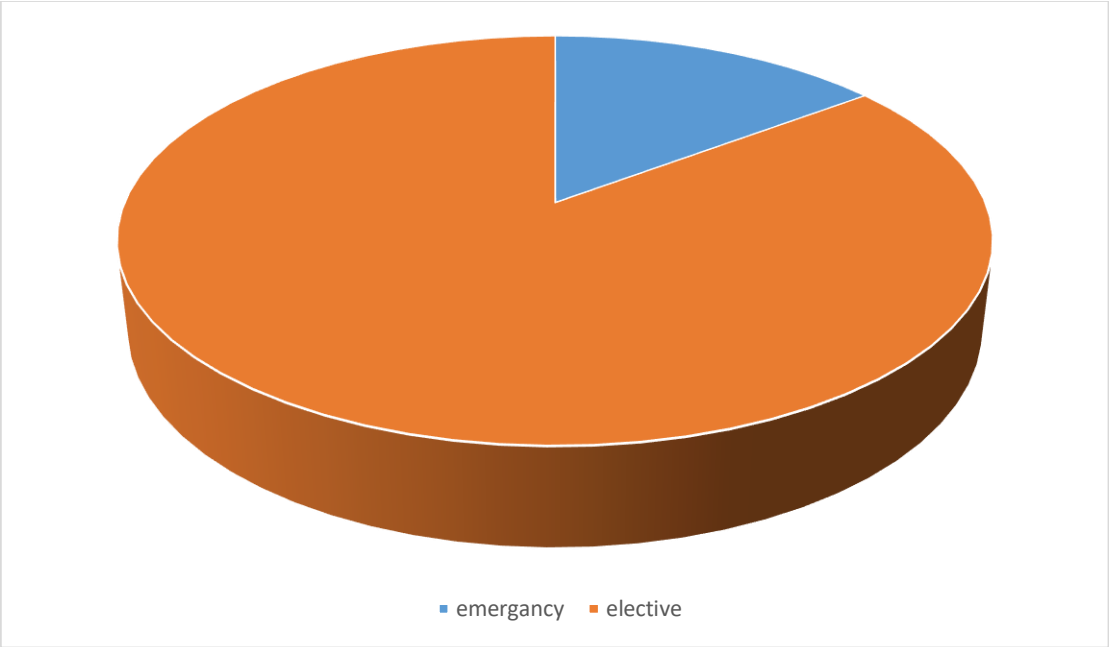


Chart 2: number of elective and emergency hysterectomy.

Table 3: Indications of elective hysterectomy.

indications	Number (%)
uterine fibroid	58(36.25%)
DUB	26(16.25%)
PMB	18(11.25%)
Cervical intraepithelial neoplasia	18(11.25%)
Ovarian tumor	16(10%)
Endometrial hyperplasia	12(7.5%)
uterovaginal prolapse	8(5%)
adenomyosis	4(2.5%)

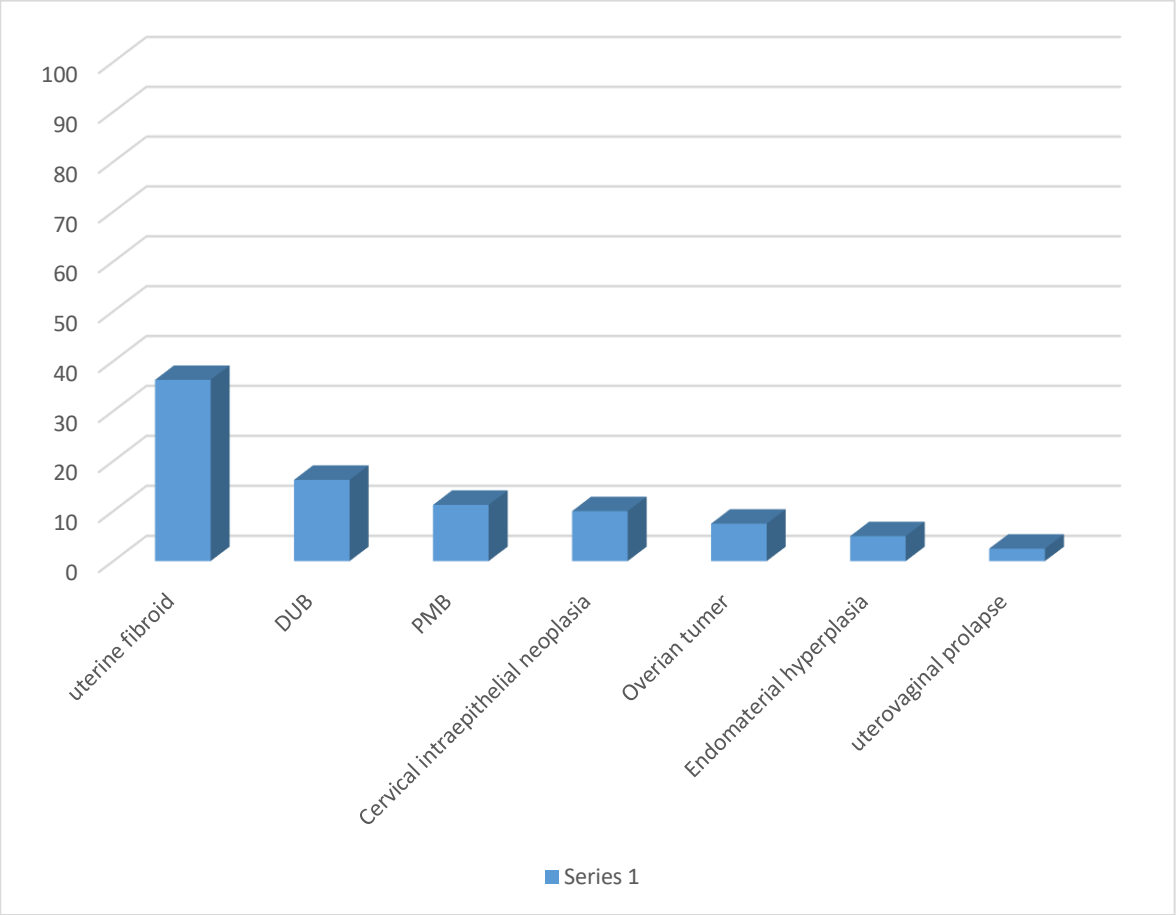


Chart 3: Indications of elective hysterectomy:

Table 4: Indications of emergency hysterectomy:

indications	Number (%)
adherent placenta	15(55.5%)
PPH	5(18.5%)
ruptured uterus	4(14. 28%)
placenta Previa	3(11.1%)

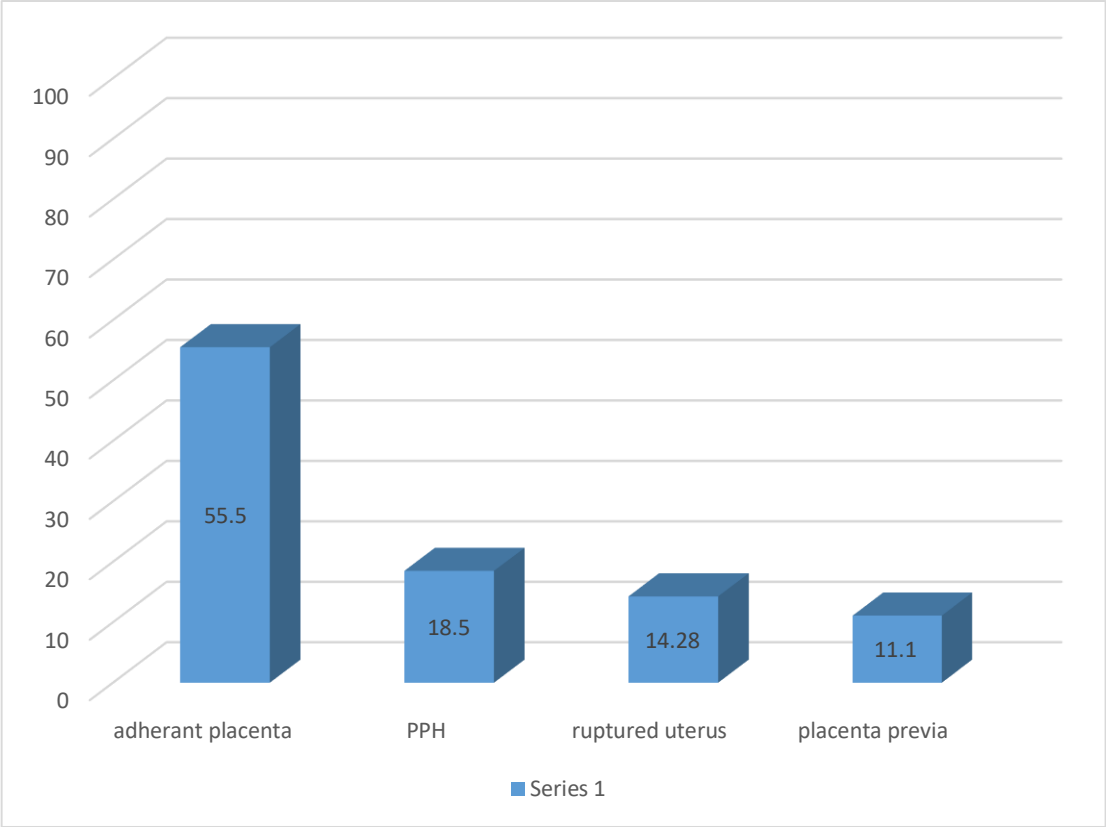


Chart 4: Indications of emergency hysterectomy.

Table 5: demographic informations.

The p-value of parity is significant because it is < 0.5

feature	elective	emergency	P - value
age mean	48.31	31.06	
gravida			
3	15(9.3%)	5(18.5)	5.79
4	40(25%)	5(18.5)	
5	35(21.8%)	4(14.8%)	
6	15(9.3%)	7(25%)	
7 & more	55(34.3%)	4(14.8%)	
parity			
3	40(25%)	5(18.5%)	0,22
4	50(31.2%)	6(22.2%)	
5	35(21.8%)	9(33.3%)	
6	15(9.3%)	2(7.4%)	
7 & more	20(12.5%)	2(7.4%)	
abortion			

0	85(53.1%)	16(59.2%)	8,97
1	35(21.8%)	7(25%)	
2	20(12.5%)	2(7.4%)	
3	10(6.3%)	2(7.4%)	
4	10(6.3%)	0(0%)	

Table 6: complications of elective and emergency hysterectomy.

The p-value of bladder injury is significant while the p-value of the other is non- significant

complication	elective	emergency	p-value
nil	114(71.2%)	13(48.1%)	0,17
bladder injury	14(8.7%)	11(40.7%)	0,0006
wound infection	26(16.2%)	1(3.7%)	0,86
febrile	6(3.7%)	2(7.4%)	3,85

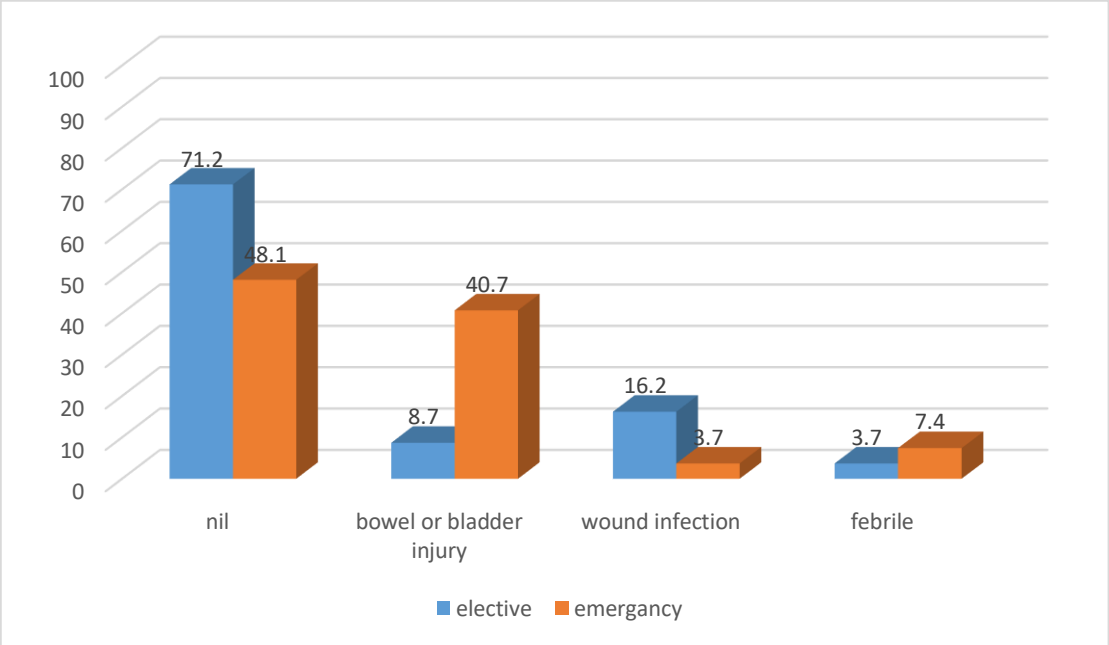


Chart 5: complications of elective and emergency hysterectomy.

Table 7: clinical characteristics of elective and emergency hysterectomy.

feature	elective	emergency	P-value
General anesthesia			
yes	155(96.8%)	27(100%)	8,75
no	5(3.2%)	0(0%)	
Type of previous delivery			
vaginal	105(65.6%)	11(40.7%)	0,14
C/S	55(34.4%)	16(59.3%)	
Type of hysterectomy			
TOTAL/ abdominal	150(93.8%)	2(7.4%)	
subtotal/abdominal	10(6.2%)	0(0%)	0,00001
subtotal vaginal	0(0%)	25(92.6%)	
Hb			
mean pre op.	10.94	10.44	
mean post op.	9.63	8.29	
blood transfusion			
nil	40(25%)	0(0%)	
<4	100(62.5%)	0(0%)	0,0003
>=4	20(12.5%)	27(100%)	
ICU stay			
nil	160(100%)	0(0%)	
1	0(0%)	15(55.5%)	0,00001
2	0(0%)	8(29.6%)	
3	0(0%)	4(14.8%)	
hospital stay			
<7	160(100%)	23(85.2%)	0,0003
>=7	0(0%)	4(14.8%)	

Table 8: Associated complications of elective and emergency hysterectomy.

The p-value for PIH is significant because it is < 0.5 while the p-value for other items in this table is consider non-significant because it is >0.5

associated complication	elective	emergency	P-value
Nil	85(53.1%)	13(48.1%)	6.3
PIH	15(9.3%)	7(25.9%)	0.14
DM	25(15.6%)	3(11.1%)	5.4
negative RH	30(18.8%)	4(14.8%)	6.2
Heart disease	5(3.1%)	0(0%)	8.7

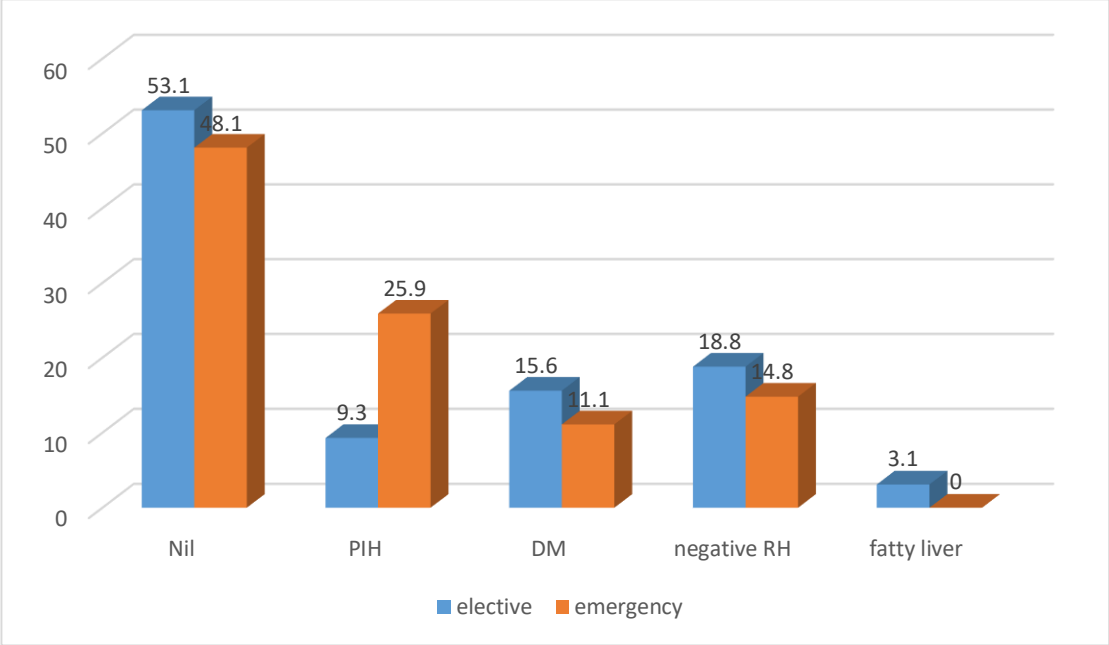


Chart 6: Associated complications of elective and emergency hysterectomy.

Discussion

Hysterectomy is a major surgical procedure that has risks and benefits, and affects a woman's hormonal balance and overall health for the rest of her life. Because of this, hysterectomy is normally recommended as a last resort to remedy certain intractable uterine/reproductive system conditions.

1. In this study on 187 hysterectomy cases a few observation were read regarding the anthropometric data , clinical presentation , type of operation , post-operative complication and observation are described below
2. In our study the incidence of hysterectomy was 8.1% which consider high when compared to China 3.3% and low when compared to USA 22%, this is may be due that Iraqi women seek medical help late as compared to women from developed countries, so conservative treatment can't be offered in most cases.

The mean age for incidence of hysterectomy was 48 years, while the of parity was 3- 5.Because the hysterectomy mostly occur at age between 45-55 years old so minority of patients come nulliparous at this age group. Such figures are comparable to those reported in Western countries, Nigeria, china and Pakistan

There is increase in occurrence of hysterectomy in patient age between 45-55 yrs and thereafter remain stable this increase is driven by high occurrence of uterine fibroid, PMD and reproductive system malignancies.

In our study we divided the hysterectomy operations in to elective and emergency so 160 cases were elective and 27 cases were emergency.

- Elective hysterectomy: Uterine fibroid is the most common indication for elective hysterectomy (36, 25%), in china and Taiwan, uterine fibroid is the most common cause of hysterectomy and this is the same as of our study, this may probably be because uterine fibroid is the most common benign genital tract tumor.

- DUB constitute about 16% of elective hysterectomy cases , in Canada is about 33% , uterovaginal prolapse constitute about 5% of cases while in India ,it is about 20% , Adenomyosis was found in 2,5% of elective hysterectomy cases ,in USA it is about 3,6% and it is nearly similar to our study results
- Emergency hysterectomy: The incidence of emergency hysterectomy in the USA is 1–3 per1,000 deliveries, but some studies from other countries have reported remarkably lower rates than the USA, such as in Norway where there was an incidence of 0.2per 1,000 deliveries, the incidence of hysterectomy in our study is (1,16%) which consider somewhat a normal percent beside that our hospital is a tertiary center so receive a lot of cases and this may increase the incidence of hysterectomy,

  The incidence of EPH varies from 0.41 to 1.55 per 1,000 deliveries in previous reports

- Indications for emergency hysterectomy have also evolved in response to the advent of improved antibiotic treatments, blood-banking techniques, and uterotonic agents. Although uncontrollable hemorrhage and infection were once considered the principal risk factors, abnormal placentation is currently thought to be the major risk factor for emergency hysterectomy. In our study, the most common indications of emergency hysterectomy were abnormal placentation, uterine a tony, and rupture uterus. Numerous causes might have contributed to our incidence of hysterectomies, such as lower socioeconomic status, lower income, poverty, lower standards of health care, high parity, religious and traditional in our region. . In addition, our hospital is reference center, and therefore, many cases with complications are referred to our hospital. Unless these tragic problems are resolved believe that the incidence will not decrease

- Most of the patient surgeries of our study were done under general anesthesia while in USA it is done under local anesthesia in form of spinal anesthesia, in our study 3 cases of elective hysterectomy were done under local anesthesia because it may be there are respiratory obstruction, or maybe there is no time to reduce the hazards of general anesthesia for example cases of full stomach and operative obstetric delivery.
- In elective hysterectomy , 93.8% of cases underwent total abdominal hysterectomy and 6.2% of cases underwent subtotal abdominal hysterectomy while in Canada 63% were abdominal hysterectomy and 37% underwent vaginal hysterectomy This is in keeping with findings from other centers because now days in western countries vaginal hysterectomy appear to be superior to laparoscopic and abdominal hysterectomy for benign disease because of its speeder return to normal activities due to smaller incision beside of that, subtotal hysterectomy is not favored except at cesarean hysterectomy, and also, it is unpopular in our environment because of the risk of cancer of the cervical stump

- Bladder was injured accidentally in 8.7% of elective hysterectomy compare to 1.5% in USA
  And there were 16, 2% of wound infection cases in elective hysterectomy and 3, 7% in emergency hysterectomy compare with 2.5% in India. These situations indicate that we have an unfavorable health system in our region, or because of poor using of antibiotic.

- Mean duration of stay in our hospital following hysterectomy by any route was less than other studies which were <7 days except 4 cases in emergency hysterectomy operations in which hospital stay>7 days while 8.7±2 in India and 7.2 in Hong Kong.

Conclusion

Hysterectomy will remain a common gynecological operation in both developing and developed countries. Women aged between 41-50 years with multiparous status were commonly affected. Abnormal menstrual flow was the commonest presenting complaint Commonest

Indications for hysterectomy were uterine fibroid Abdominal hysterectomies were commonly done than vaginal hysterectomy from above we can hypothesize that the triad of uterine fibroids, age 45 and beyond, as well as multiparty, in a patient increases the likelihood for total abdominal hysterectomy.

Recommendations

- Vaginal hysterectomy is the approach of choice whenever feasible. Evidence demonstrates that it is associated with better outcomes when compared with other approaches to hysterectomy.
- Laparoscopic hysterectomy is a preferable alternative to open abdominal hysterectomy for those patients in whom a vaginal hysterectomy is not indicated or feasible.
- Inter a good screening program for early detection of benign and malignant malignancies to treat it conservatively and this will decrease the incidence of hysterectomy.
- Abnormal placentation is thought to be the major risk factor for emergency hysterectomy and this can be decreased by decreasing the number of c/s.
- Good application of antibiotics, this will decrease the post-operative complication such as wound infection.

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