

Indications for a Hysterectomy at Jordan University Hospital; a Teaching Hospital Experience

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Abstract

Background and Aims: The indications for hysterectomy have changed due to the introduction of many alternatives. However, it is still the most common major gynecological operation. Therefore, this study was conducted to study the indications for a hysterectomy in a teaching hospital.

Materials and Methods: This is a retrospective study analyzing the indications for hysterectomy in a teaching hospital over a period of two years (2008-2009). In total, 148 hysterectomies were analyzed. The case notes of these patients were reviewed.

Results: The mean age was 46.6 year. Bleeding disorders, uterine fibroids, and abdominal pain were the most frequent indications accounting for 68%. Only 15% were performed due to malignant or premalignant conditions.

The final histopathology reports revealed that the most common finding in the uterine specimens was fibroid, which was reported in 50 patients (33.78%), followed by adenomyosis which was reported in 38 patients (25.68%). About 90% of our hysterectomies were carried out through an abdominal route and 10% by the vaginal route. We reported no major complication that endanger the life of the patient as most of the complications were the usual minor postoperative ones ranging from wound infection in 9% to fever and abdominal pain in 1%.

Conclusion: The vast majority of hysterectomies were performed to relieve the symptoms of pain, bleeding, or both which means that the indication can be summarized due to discomfort and inconvenience rather than threaten life. It is very clear that age has an important influence on the relative frequency of the indications which are flexible rather than absolute.

Keywords: Hysterectomy, Fibroid, Adenomyosis, Menorrhagia.

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Introduction

Hysterectomy has been a common gynecological operation for generations, and it is the most common major gynecological

operation performed worldwide [1, 2], being the second most frequent surgical operation performed on women after cesarean section [3]. It is estimated that by the age of 64 years, more than 40% of women all over the world

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will have a hysterectomy mainly in the united states and first world countries[4]. In spite of a large number of potential alternatives to hysterectomy for the management of benign diseases, hysterectomy rates have remained relatively stable [5] and the most are performed for benign conditions primarily excessive uterine bleeding due to hormonal imbalance, fibroids, and pain. A review of the literature revealed a lack of local studies examining the indications and complications associated with hysterectomy. When women face the decision whether to have a hysterectomy, the physicians must provide information about their conditions, indications for surgery, surgical procedure, recovery, and sequelae, but medical information is not the only factor in these decisions. This surgery remains an effective treatment for excessive menstrual blood loss with high rates of patient satisfaction in the short term [6]. The indications for hysterectomy have changed little over the last decade, but a patient with an enlarged uterus is presented with irregular uterine bleeding with no anatomical causes, and when another methods fail to control their bleeding, the surgery could be the best solution to avoid the possible complications of this bleeding, or the possible development of carcinous changes with time. An ultrasound may be helpful to diagnose a uterine abnormality, but an endometrial biopsy is a mandatory step prior to decision of frank surgery.

In USA and UK 60-80% of hysterectomies were performed through an abdominal route [7,8]. However, in a Cochrane review about surgical approach to hysterectomy for benign gynecological disease, the authors concluded that vaginal hysterectomy should be performed in preference to abdominal hysterectomy when possible because of equal or significantly

better outcome on all parameters [9]. Several prospective-controlled studies have shown that total laparoscopic hysterectomy to be a safe alternative to open surgery not only for benign indications, but also for endometrial cancer.[10,11]

In 1950, Albridge and Meredith [12] described the infra fascial technique of total hysterectomy for the treatment of benign diseases of the uterus, in which the pericervical fascia is preserved [12]. The lifetime risk of developing ovarian cancer in the general population is 1-2% [13], and for women with a family history of ovarian cancer, their lifetime risk of developing this disease increased to 4-5% with one first degree and to 7% when 2-first degree relatives are affected [14,15,16]. This issue makes a responsibility of the surgeon for the type and route of surgery chosen in nonemergency and non-oncologic indications. It poses a threat to the perception of femininity for some women who undergo the procedure [17]. The informed consent processes for hysterectomy requires discussion for several important considerations which may be intraoperative or postoperative. The purpose of this study is to audit the indications and complications of hysterectomy during two years. This study may lead to the development of criteria to assess the appropriateness or otherwise of the use of hysterectomy completed the efforts exerted by Rieter et al [18] and Carlson et al [19].

Patients and Methods:

This is a retrospective review of the case records of all patients who underwent hysterectomy by the authors during the years 2008-2009 and in total 148 patients underwent the procedure. A total number of 107 patients had hysterectomy alone, while the rest 41

patients had hysterectomy plus salpingo-oophorectomy. The subtotal hysterectomies as well as the radical ones during the study period were excluded. Most of the patients underwent examination under anesthesia (EUA), dilatation and curettage (D&C) \pm hysteroscopy prior to the decision of surgery which was taken after reviewing the report of histopathology. When the patient appointed for surgery, she was admitted one day before, and a careful history taken followed by a physical examination, the routine investigations performed included complete blood count, chest x-ray, urea, sugar, and electrolytes, cross match for possible blood transfusion. Standard pattern of care to the patient included patient information's (verbal and written) prior to the procedure, informed consent, thromboembolic prophylaxis in the form of perioperative injections administered subcutaneously from the time of premedication until full mobility has been achieved together with routine prophylaxis intra venous antibiotics pre-operative and for the first 24 hours post operative, unless there was an indication to prolong the period. All patients had Foleys catheter inserted at time of surgery which removed early in the next day.

Results:

During the study period, a total number of 148 patients underwent hysterectomy, mean age at time of hysterectomy was 46.61 years, (range 35-76); the majority of hysterectomies 129 (87.16%) has been performed for women in the fourth and fifth decades of life, 13 (8.78%) of them were above 60 years of age, while 6 (4.05%) of them were less than 40 years of age. Concerning parity, 83.8% were multiparous, 1.3% were para one and 14.9% were nulligravida as illustrated in Table 1. The average hospital stay was ranging from 1 to 30

days and there were no mortality cases. The clinical indication for surgery is shown in Table 2. The indication listed in this table pointed to the first listed major indication when multiple preoperative indications were named to be a cause. About 64.18% of hysterectomies were performed for benign conditions, while 16.21% were performed for premalignant and malignant diseases. The primary indication as listed was menstrual disorders, particularly menorrhagia, appear to be the commonest indication followed by symptomatic fibroids, and less common cases were carried out for malignancy. The final histopathology report revealed that the most common finding in the uterine specimens was primarily fibroid as reported in 50 patients (33.78%), which are clearly listed in Table 3. Adenomyosis was reported in 38 patients (25.68%). There were 18 patients (12.16%) of frank malignancy mainly in the endometrium, while there were 17 cases of endometrial hyperplasia (11.49%) mostly among the patients with a menstrual disorder in their late menstrual years. On the whole, 14 patients (12.16%) had no pathological findings, and 11 patients (7.43%) with miscellaneous findings. Of the study group, 133 operations (89.86%) were performed by the abdominal route; 15 (10.14%) were performed by the vaginal route. Forty one patients (27.70%) underwent hysterectomy and bilateral salpingo-oophorectomy (BSO), while 107 (72.30%) underwent hysterectomy alone with preservations of the ovaries.

Discussion

Most hysterectomies are discretionary rather than life saving [20]. The condition that may lead to a hysterectomy almost cause discomfort and inconvenience rather than threaten life. Broadly speaking, the vast majority of

hysterectomies are performed to relieve the symptoms of pain and bleeding or both. We can report in our study that fibroids and abnormal bleeding are the most frequent indications accounting for as many as 55% of all hysterectomies. The diversity of symptoms can have an immense influence on women's quality of life, affecting aspects of her daily routine, general health and sense of wellbeing. Consequently, hysterectomy rates vary widely between countries and over small geographic areas within the countries [21]. This substantial variation in hysterectomy rates mainly according to geographic, patient-related, and physician-related factors. Although hysterectomy rates in Western countries are diminishing owing to a generally more conservative approach, this operation is still widely performed [22]. However, rates differ considerably between countries, ranging from a high of 5.4 per 1000 women in the USA [23] to intermediate rates, such as 3.7 per 1000 in Italy [24], to a low of 1.2 per 1000 in Norway [25]. The hysterectomy rate in developing countries is lower. The rate has dropped by approximately 1% every decade since 1980; even so, almost 20% of women in these countries will have a hysterectomy by the age of 55 years [26-29]. In most women who suffer gynecological disorders, quality of life improves following a hysterectomy as 75% of our patients were happy regarding this issue after the planned surgery. Moreover, this surgery does not tend to produce any psychological disturbances in otherwise psychologically healthy women. In this way, most women who are undergoing this operation regain a so-called normal life. While hysterectomy carries a low risk of mortality, [30,31] it is a major surgery that can require weeks, and possibly months, for recovery. [32,33]. In our patients we reported no major

complication that endanger the life of the patient as most of the complications as reported were the normal minor postoperative ones ranging from wound infection in 9.46% to fever and abdominal pain in 1.35%. Menorrhagia is the most frequent cause for hysterectomy in pre-menopausal women, with myomas and adenomyosis constituting the leading pathologies of the uterus. In our study it is very clear that out of 148 patients involved in the study, 32.54% of patients underwent surgery due to heavy bleeding, while 23.00% due to fibroids and 12.83% due to abdominal pain, where 10.14% due to malignant changes mainly in the endometrium. In a series written by David-Montefiore et al on 2007, out of 634 patients underwent total abdominal hysterectomy, 388 patients (61.2%) were performed due to dysfunctional uterine bleeding and fibroids [34]. These indications are clearly explained by Ken Sinervo [35] in his famous report about the indications for hysterectomy as well as mentioned similarly by others [36-39]. The current indications have evolved considerably from time to time when heavy bleeding, fear of cancer, and undiagnosed pelvic pain were common reasons for the procedure [40-42]. Two patients in our series (1.35%) underwent urgent post partum hysterectomy as life saving procedure post caesarian section due to uncontrollable post partum bleeding due to placenta praevia accreta. Both patients were admitted to the hospital earlier in the third trimester to avoid the emergency catastrophe in losing a patient. This abnormal placentation and uterine atony were identified as risk factors for emergency peripartum hysterectomy. [43,44].

In our study the procedure was performed via the abdominal route in 89.86% and by the vaginal route in 10.14%. Most of the studies

have reported the highest abdominal route rather than the vaginal route in a similar result of our study [42, 45-49]. We think that it is possible to reduce the use of laparotomy for hysterectomy with adequate training in both vaginal and laparoscopic surgery. In our department, the choice of the route still depends on the surgeon's experience, and on local preferences. The large variations in practice indicate that the route of surgery is more dependent on the clinical preference of the gynecologist than the medical situation.

In the current study, we reported that 41 patients (27.70%) underwent hysterectomy + BSO, while 107 patients (72.30%) underwent hysterectomy alone with preservations of the ovaries. We believe in the benefits of ovarian conservation, and at no age is there a clear benefit from prophylactic oophorectomy. The importance of this study in this particular point is the ovarian conservation at time of hysterectomy (in women who are not at risk for ovarian cancer or having related malignancy at time of surgery, even in postmenopausal women) may lead to longer survival, and limited the need for hormonal replacement therapy.

There is no argumentation about the absolute indication of hysterectomy as definitive treatment for most of the malignant conditions and in particular those of uterus. In our study, frank malignancy and the premalignant situations accounted for 16.2%. All reports in this issue confirmed our point of view in this issue [39, 50, 51]. One patient in our series (0.67%) underwent hysterectomy due to trophoblastic disease that persists after

chemotherapy with continuous uterine bleeding. For this patient we feel that hysterectomy is valuable as primary and adjuvant therapy. The same results reported by Alazzam M et al [52] and Pisal N et al [53]. One patient in our series (0.67%) underwent the procedure prophylactically upon her request based on the history of her family conditions of malignancy as her mother died by endometrial cancer and one sister died of ovarian cancer. The role of prophylactic hysterectomy in patients at high risk for hereditary cancers was reported in many studies. [40, 54, 55]

Broadly speaking, the vast majority of hysterectomies are performed to relieve the symptoms of pain, bleeding, or both which means that the indication can be summarized due to discomfort and inconvenience rather than threaten life. According to the current study, the bleeding disorders, uterine fibroids, and abdominal pain are the most frequent indications, accounting for as many as 68% of all hysterectomies. Approximately 15% of cases are performed for malignant and premalignant conditions. It is very clear that age has an important influence on the relative frequency of the indications which are flexible rather than absolute. Few years ago, the decision for surgery would have been decided by the treating gynecologist based on traditional gynecologic thinking. Recently, however, women are becoming partners in the decision that, in our opinion, is positive. When the decision for intervention is selected, there are aspects that need to be considered in order for the best route to be selected.

Table 1: Age distribution of patients

Age (years)	No. of patients	Percentage (%)
Less than 40	06	04.06
40-60	129	87.16
More than 60	13	08.78
Total	148	100
Parity		
Multiparous	124	83.8
Para one	2	1.3
Nulliparous	22	14.9

Table 2: Indication for surgery

Parameter	No. of patients	Percentage (%)
Heavy bleeding	48	32.43
Fibroids	34	23.00
Abdominal pain	19	12.83
Postmenopausal bleeding	15	10.14
Malignancy	11	07.43
Endometrial hyperplasia	06	04.04
Abnormal Pap smear	07	04.73
Uterine prolapsed	04	02.70
Obstetric indication	02	01.35
Others	02	01.35
Total	148	100

Table 3: Final histopathology after surgery

Parameter	No. of patients	Percentage (%)
Fibroids	50	33.78
Adenomyosis	38	25.68
Malignancy	18	12.16
Endometrial hyperplasia	17	11.49
No specific pathology	14	09.46
Others	11	07.43
Total	148	100

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استطابات استئصال الرحم: خبرة مستشفى تعليمي

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الملخص

تغيرت استطابات استئصال الرحم بسبب تعدد البدائل العلاجية، ومع ذلك تعد عملية استئصال الرحم العملية الجراحية الأكثر شيوعاً بتخصص النسائية والتوليد. وعليه؛ فقد أجريت هذه الدراسة لتحليل مبررات الاستئصال في مستشفى تعليمي، وهي دراسة راجعة اعتمدت على مراجعة ملفات المرضى الذين أدخلوا إلى مستشفى الجامعة الأردنية لتحديد سبب الاستئصال للفترة بين 2008-2009م. لقد تمت مراجعة الملفات الطبية لـ 148 مريضة خضعن للعملية الجراحية، وكان معدل العمر يقارب 6 و46 سنة، حيث تبين أن أهم المبررات تتمثل بمشكلات النزيف الرحمي، الأورام الليفية، وألم البطن التي شكلت ما نسبته 68%، وأن ما نسبته 15% من العملية الجراحية قد أجريت بسبب الأورام السرطانية. لقد تبين بتحليل الفحص النسيجي النهائية أن هناك أليافاً رحمية بعينات الرحم لحوالي 50 مريضة بنسبة (38%)، واحتل بعدها وجود غشاء بطانة الرحم داخل العضلة الرحمية (عضال غدي رحمي) في عينات 38 مريضة بنسبة (25.68%). أجريت العملية عن طريق فتح البطن لحوالي 90% بينما أجريت العملية عن طريق المهبل لحوالي 10%، ولم يسجل خلالها أي مضاعفة جراحية كبرى قد هددت حياة أي مريضة من هذه النسبة، بينما سجلت بعض المضاعفات الجراحية البسيطة وتراوحت بين التهاب بجرح العملية 9% من المرضى، وارتفاع في درجة الحرارة مع ألم بمنطقة العملية لنسبة 1% منهم، وخلصت الدراسة إلى أن استطابات استئصال الرحم كانت تحدف إلى تخفيف أعراض الشكوى المرضية من ألم ونزيف رحمي أو كليهما، ونستنتج أن المبرر الأساسي يهدف إلى إنهاء معاناة المرضى التي لا تشكل تهديداً حقيقياً لحياتهم. تأكيد أهمية العمر الذي يؤثر في القرار الجراحي، كعامل نسبي وليس عاملاً مطلقاً.

الكلمات الدالة: استطابات استئصال الرحم، الأورام الليفية، عضال غدي، صحي.