

**A SIX YEAR REVIEW OF HYSTERECTOMY FOR BENIGN GYNECOLOGICAL CONDITIONS AT THE
FEDERAL MEDICAL CENTRE, OWERRI**

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ABSTRACT: Hysterectomy is one of the commonest major gynaecological surgeries performed for both benign and malignant conditions. Hysterectomy for benign gynaecological conditions is usually done to improve the quality of life of women who suffer from these disorders. The aim of present study was to analyze hysterectomies performed in the centre for benign gynaecological conditions during the period of the study. This was a retrospective descriptive study of all cases of hysterectomy (for benign gynaecological disorders over a 6 year period (January 1, 2006 – December 31, 2011) at Federal Medical Centre, Owerri. Information on socio-demographic characteristics, clinical presentation, indication for surgery, type of hysterectomy, operative findings, and postoperative complications during admission were retrieved and analyzed. Hysterectomy for benign gynecological conditions accounted for 14.1% of all major gynecological surgeries. It was the third commonest major gynecological operation in this centre during the study period behind abdominal myomectomy and salpingectomy. The leading indications for hysterectomy were uterovaginal prolapse (47.3%), uterine fibroid (33.6%), and dysfunctional uterine bleeding (DUB) (9.1%). Abdominal hysterectomy with or without salpingo-oophorectomy accounted for 55.0% while vaginal hysterectomy accounted for 45.0% of hysterectomies performed for benign gynecological conditions.. A post-operative morbidity rate of 23.7% was found. Post operative fever, requiring investigation and treatment, was the leading complication, 71.0%, followed by wound infection, 19.4% and wound dehiscence, 3.2%. No mortality associated with hysterectomy was recorded. Hysterectomy for benign gynaecological conditions is relatively common and safe in our centre, but there is need for improvement on the high post-operative morbidity rate.

KEYWORDS: Hysterectomy, Uterus, Benign Gynecological Conditions, Owerri.

INTRODUCTION

Hysterectomy which is the complete removal of the uterus is one of the most frequently performed major gynaecological procedures both for benign and malignant conditions of the uterus ([Schorge et al., 2008](#); [Wieslander et al., 2007](#)). Hysterectomy for benign gynaecological conditions are usually undertaken to improve the quality of life of affected women ([Gray, 2005](#); [Jones, 2008](#)). Hysterectomy may be completed using abdominal, vaginal or laparoscopic approach, and the choice of which approach is influenced by many factors ([Schorge et al., 2008](#); [Jones, 2008](#)). Some of the benign conditions for which hysterectomy can be performed include uterine leiomyoma, uterovaginal prolapse, menstrual disorders, cervical intraepithelial neoplasm, endometrial or cervical polyps, chronic pelvic pain and adenomyosis ([Schorge et al., 2008](#); [Wieslander et al., 2007](#); [Jones, 2008](#)). The incidence of hysterectomy varies from country to country. In the developed countries, the incidence is high and increasing. In the United Kingdom, it is estimated that about 20%

of the women would have undergone hysterectomy by the age of 50years mainly for menstrual disorders and uterine fibroids ([Thakar et al., 2004](#); [Vassey et al., 1992](#)). In the United States of America, hysterectomy is the second most frequently performed surgical procedure after Caesarean section and it is estimated that at least one in three women would have had a hysterectomy before the age of 60 years ([Farguhar and Steiner, 2002](#)). In developing countries, like ours, most women would reject hysterectomy for fear of surgery, loss of femininity and concerns about future fertility after reincarnation ([Onah and Ezegwui, 2002](#)). In a separate studies in the University of Nigeria Teaching Hospital, Enugu and the University College Hospital, Ibadan, hysterectomy accounted for 14% and 10.2% respectively, of all major gynaecological operations ([Onah and Ezegwui, 2002](#); [Olumuyiwa and Okunlola, 2001](#)). Hysterectomy may be accomplished using different approach as noted earlier and the choice of which to use depends on a number of

clinical factors and the expertise of the surgeon (Schorge *et al.*, 2008; Johnson *et al.*, 2005). Abdominal hysterectomy allows the greatest ability to manipulate pelvic organs and is preferred if large pelvic organs or extensive adhesions are anticipated. It also offers good access to the ovaries if oophorectomy is desired. However, abdominal hysterectomy is associated with longer patient recovery and long hospital stay, greater risk of postoperative fever, and wound infection when compared to vaginal hysterectomy (Johnson *et al.*, 2005).

Supra-cervical hysterectomy (or subtotal hysterectomy) was thought to have advantage over total abdominal hysterectomy (TAH) in improving urinary symptoms and preservation of sexual function. This tilted the balance in favour of subtotal hysterectomy in the 1990s (Kilkku, 1985; Baggies, 2005). However, randomized studies have shown that abdominal supra-cervical hysterectomy offers no distinct advantages over TAH and in fact there is the risk of cervical cancer and persistent bleeding following supra-cervical hysterectomy (Kuppermann *et al.*, 2005; Roussis *et al.*, 2004). Total abdominal hysterectomy and vaginal hysterectomy tend to be the most commonly performed procedures for benign gynaecological conditions in Nigeria (Omole-Ohonsi *et al.*, 2005; Orji and Ndokuba, 2002). These are usually done for multiparous women between their 4th and 6th decades of life (Omole-Ohonsi *et al.*, 2005; Orji and Ndokuba, 2002; Shittu *et al.*, 2003). Complications of hysterectomy include injury to the urinary system (ureter and bladder), postoperative fever, urinary tract infection, wound infection, pelvic haematoma or infection, injury to the bowel among others (Shittu *et al.*, 2003; Gimbel, 2007).

In our environment, hysterectomy is one the most commonly performed procedures and remains an effective and safe intervention for many women with a variety of benign gynaecological disorders. This study was carried out to determine the prevalence among other major gynaecological operations, patients' demographic parameters, indications, postoperative morbidity, and the type of procedure performed in our centre.

MATERIALS AND METHODS

This was a retrospective descriptive study of all cases of hysterectomy (both abdominal and vaginal) for benign gynecological conditions over a 6 year period (January 1, 2006 – December 31, 2011) in the Federal Medical Centre, Owerri. The FMC, Owerri is a 500 bed tertiary hospital serving as a referral centre for four contiguous states of the federation

including Imo, Abia, Anambra, and Rivers States. It also serves as a residency training centre in various disciplines of medicine. It is located in Owerri, the capital of Imo State in the South East geopolitical zone. The total number of all major gynaecological operations and the hospital numbers of women that had hysterectomy for benign conditions were retrieved from the theatre operation registers. The hospital numbers were used to trace the case notes of the patients from the hospital record department. Information on socio-demographic characteristics, clinical presentation, and indication for surgery, type of hysterectomy, operative findings, and post-operative complications during admission and at follow up of each patient were retrieved and analyzed. Descriptive statistics was done with SPSS software for windows version 17.0 (SPSS Inc., Chicago, IL).

RESULTS

The total number of major gynaecological operations performed during the 6 year period was 931, out of which 131 were hysterectomies for benign gynaecological conditions, which amounts to 14.1% of major gynaecological surgeries. Hysterectomy was the third commonest major gynaecological operation behind abdominal myomectomy (48.5%) and salpingectomy (17.4%). The socio-demographic characteristics as shown in table 1 revealed that the majority of women who had hysterectomy were in their 5th to 6th decades of life. The mean age was 50.1±15.6 years with a range of 30-75 years. The majority 66 (50.4%) were grand-multipara, while only 1 person (0.8%) was a nullipara who had hysterectomy for endometrial hyperplasia. The indications for and types of hysterectomy are shown in table 3. The leading indications for hysterectomy were uterovaginal prolapse, 62 (47.3%), while uterine fibroid with or without heavy menstrual bleeding was the second most common 44 (33.6%). Other indications include dysfunctional uterine bleeding 12 (9.1%), endometrial hyperplasia 5 (3.8%), cervical intra-epithelial neoplasia 4 (3.1%) and others such as chronic pelvic pain, adenomyosis etc. Most of the women, 72 (55.0%) had abdominal hysterectomy, while 59 (45.0%) had vaginal hysterectomy. Among those who had abdominal hysterectomy, 22 (30.6%), had hysterectomy with bilateral salpingo-oophorectomy, 38 (52.8%) had total hysterectomy without oophorectomy while 12 (16.6%) were subtotal hysterectomies.

The uterine size was clinically adjudged to be normal in 35 (26.7%) cases, while in 40 (30.5%) cases the uterine size was found to be slightly

larger than normal but less than 12 weeks. Nearly half, 46 (35.1%) had intra-operative finding of uterine size between 12 to 24 weeks, while only 10(7.7%) cases had uterine size greater than 24 weeks size. Elongated uterine cervix with or without pelvic wall prolapse was seen in 53 (40.5%) cases, while uterine leiomyoma with or without adhesions was found in 51(38.9%) of cases. No gross pathology was found intra-operatively in 15(11.4%) cases while uni-or bilateral ovarian cyst was found in 9.2% of cases. There were 31 patients with recorded post-operative complications giving a post-operative morbidity rate of 23.7%. Postoperative fever (71.0%) was the leading complication. Wound infection (19.4%) was the second most common post operative complication, while only one patient (3.2%) each had wound dehiscence, bladder and ureteric injury. A large proportion (80.2%) of the patients stayed in the hospital for 5-7 days, while 19.8% stayed beyond 7 days as a result of postoperative complication as shown in table 5. There was no recorded death among patients in the study population. Table (1) shows that hysterectomy was most common among women above 40 years of age and also in grandmultiparous women.

Table 1: Socio-demographic characteristics of women who had hysterectomy for benign conditions at the study centre

Characteristics	Number of patients (%)
Age (years)	
30-39	13(9.9)
40-49	58(44.3)
50-59	38(29.0)
60-69	16(12.2)
≥ 70	06(4.6)
Total	131(100)
Parity	
0	1(0.8)
1-2	24(18.3)
3-4	40(30.5)
≥5	66(50.4)
Total	131(100)

Table 2: Indications and type of Hysterectomy for the period under study

Indication	Number of patients (%)
Uterovaginal prolapse	62 (47.3)
Uterine fibroid ± heavy menstrual bleeding	44 (33.6)
Dysfunctional uterine bleeding	12 (9.1)
Endometrial hyperplasia	5 (3.8)
Cervical Intraepithelial Neoplasia	4 (3.1)
Others (e.g Chronic pelvic pain, Adenomyosis etc)	4 (3.1)
Total	131 (100)
Type of Hysterectomy	
TAH ±BSO	22 (16.8)
TAH only	38 (29.0)
Vaginal Hysterectomy ± pelvic floor repair	59 (45.0)
Subtotal Hysterectomy	12 (9.2)
Total	131 (100)

Table 3 shows that most (40.5%) of the women who had hysterectomy had some form of pelvic wall prolapse or elongated uterus, while (38.9%) had uterine myoma with or without pelvic adhesions. Ovarian cyst was found in about 9.2% of the patients.

Table 3: Distribution of uterine size and operative findings

Uterine size (weeks)	Number of patients (%)
Normal	35 (36.7)
< 12	40 (30.5)
12-24	46 (35.1)
>24	10 (7.7)
Total	131 (100)
Operative findings	
Normal	15 (11.4)
Elongated uterine cervix ±pelvic wall prolapse	53 (40.5)
Fibroid	38 (29.0)
Fibroid + adhesion	13 (9.9)
Ovarian cyst	12 (9.2)

Table 4: Complications following hysterectomy

Complications	No. of patients (%)
Wound infection	6(19.4)
Postoperative fever	22(71.0)
Wound dehiscence	1(3.2)
Bladder injury	1(3.2)
Ureteric injury	1(3.2)
Total	31(100)

DISCUSSION

Hysterectomy for benign gynaecological conditions accounted for 14.1% of major gynecological surgeries. This was comparable to the findings in other parts of the country like Kano, Enugu, Jos and Calabar ([Anzaku and Musa, 2012](#); [Onah and Ezegwui, 2002](#); [Omole-Ohonsi et al., 2005](#); [Bukar et al., 2010](#)) but higher than the figures from, Gombe, Ibadan, and Uyo ([Bukar et al., 2010](#); [Olumuyiwa and Okunlola, 2001](#); [Abasiattai et al., 2009](#)). The findings that the majority of patients who had hysterectomy were multiparous and in their 5th and 6th decades of life were similar to other published series ([Omole-Ohonsi et al., 2005](#); [Orji and Ndokuba, 2002](#); [Udoma et al., 2004](#)) and reflects the socio-cultural background of the population studied. The importance attached to child bearing in our environment may be the reason why hysterectomy rate was low in women with low parity, occurring only in 19.1% of those that are Para 2 or less, in this study. Only one (0.8%) of those who had hysterectomy was a nullipara. This was far lower than the figures from Maiduguri and Calabar where 20% and 2.9% respectively, of hysterectomies were in nulliparous women ([Udoma et al., 2004](#); [Kuwa et al., 2007](#)).

The leading indication for hysterectomy in this study was uterovaginal prolapse 62(47.3%) which was closely followed by uterine fibroid 44

(33.6%). This was not in agreement with other findings elsewhere where uterine fibroid was the leading indication for hysterectomy ([Kuwa et al., 2007](#); [Aksu et al., 2004](#)). The reason for this may be that even though uterine fibroid was very common, most women with uterine fibroid in our environment would prefer myomectomy to hysterectomy in their management as the former conserves the uterus.

Total abdominal hysterectomy accounted for 60(45.8%) of the hysterectomies in this study. This was comparable to 42.6% in other parts of the world ([David et al., 2007](#)), but lower than 75% and 81.7% reported in Jos and Gombe ([Bukar et al., 2010](#)). The vaginal hysterectomy rate of 45.0% in this study was higher than 20.7%, 10.6% and 19.3% reported in some parts of the country ([Bukar et al., 2010](#); [Kuwa et al., 2007](#)). The higher rate of vaginal hysterectomy in this study was because most of the patients presented with uterovaginal prolapse that could safely be removed through the vaginal route. Vaginal hysterectomy has been shown to have less post operative morbidity and shorter hospital stays than abdominal which was in agreement with the findings of this study ([Kuwa et al., 2007](#); [David et al., 2007](#)). It should therefore, be performed more readily whenever feasible.

Supra-cervical (subtotal) hysterectomy was performed in 12 (9.2%) of the cases. This is higher than 4.4% and 5.8% reported from Gombe and Maiduguri ([Kuwa et al., 2007](#); [David et al., 2007](#)). Supra-cervical hysterectomy is faster to do than total abdominal hysterectomy and was also previously thought to protect from bladder and sexual dysfunction ([Killku, 1985](#); [Baggies, 2005](#)). However, recent studies have shown that supra-cervical hysterectomy has no clear advantage over total abdominal or vaginal hysterectomy in terms of urinary symptoms and sexual function ([Kuppermann et al., 2005](#); [Roussis et al., 2004](#); [David et al., 2007](#)).

The majority of the patients had normal or uterine size less than 12 weeks size 75 (57.2%). This was similar to the findings in Gombe and South Africa where more than half of the patients had uterine size less than 12weeks ([Chrysostomu, 2008](#)), but higher than the findings in Enugu and Ibadan where fewer patients had normal or uterine size less than 12 weeks ([Onah and Ezegwui, 2002](#); [Olumuyiwa and Okunlola, 2001](#)). Elongated uterine cervix with or without pelvic wall prolapse 53 (40.5%) was the commonest intra-operative finding noted in this study. This was not surprising since the leading cause of hysterectomy was uterovaginal prolapse. Uterine fibroid was seen in 51(38.9%) of the patients. Its association with

pelvic adhesions was seen in 13 (9.9%) of the cases which is comparable to the findings in similar studies in Gombe and South Africa ([Bukar et al., 2010](#); [Chrysostomu, 2008](#)). The association between uterine fibroid and pelvic adhesions was proposed by some authors ([Onah and Ezegwui, 2002](#); [Olumuyiwa and Okunlola, 2001](#)), but was disputed by some others ([Leung et al., 2007](#)).

The mean duration of hospital stay was 8.1 days with a range of 5-22 days. This was similar to the 8.3 days reported by [Bukar et al., \(2010\)](#) but lower than the 11.2 days reported by [Kuwa et al., \(2007\)](#). The crude postoperative morbidity rate of 23.7% found in this study is comparable to 24.2% ([Onah and Ezegwui, 2002](#)). [David et al., \(2007\)](#) reported in earlier studies in Enugu and Paris but lower than 31.5% and 32.6% reported in Gombe and Ethiopia, respectively ([Gaym, 2002](#); [Bukar et al., 2010](#)). Post operative fever requiring investigations was the leading complication 22(71.0%) in this study. This was similar to the findings by [Ahmed and Wasti, \(2001\)](#) but different from studies by Bukar et al and Anzaku et al² where wound infection was the leading post operative complication.

There was no mortality in this study as was the case in other studies ([Bukar et al., 2010](#)). This may be a reflection of the safety of the procedure and the high standard of care in our centre.

In conclusion, hysterectomy for benign gynaecological conditions is relatively common and safe in this centre, but there is need for improvement on the high post operative morbidity rate. The shorter duration of hospital stay and fewer post-operative complications following vaginal hysterectomy has an economic appeal and therefore vaginal hysterectomy should be the preferred route whenever feasible.

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