
HYSTERECTOMY AT AMINU KANO TEACHING HOSPITAL KANO, NIGERIA: A 2 YEAR REVIEW

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ABSTRACT

BACKGROUND: Hysterectomy is the most frequently performed major gynaecological operation worldwide. Globally, over 1.2million women undergo this surgery annually. This has led to a major controversy that hysterectomies are being performed for unnecessary reasons.

OBJECTIVES: To determine the prevalence and outcome of hysterectomies in Aminu Kano Teaching Hospital.

METHODOLOGY: It was a retrospective study of the hysterectomies done at Aminu Kano Teaching Hospital, between 1st Jan 2015 and 31st Dec 2016.

RESULTS: The prevalence of hysterectomy was 18.18%. The mean age at hysterectomy was 48.38 ± 10.7 yrs. The rate of hysterectomy was highest amongst grand multiparous women, the mean parity was 5.9 ± 3.3 . Symptomatic uterine fibroid was the leading indication for hysterectomy accounting for 29.8%. Most of the hysterectomies were performed via the abdominal route. The ratio of abdominal to vaginal approach was 4.9:1. The most common complication was haemorrhage. Two out of the 47 patients died giving a mortality rate of 4.3%. The average duration of surgery was between 1 and 2 hours (81.5%). The average estimated blood loss was less than 500mls. The histological diagnosis corresponds with the preoperative diagnosis in 72.7% of cases.

CONCLUSION: The rate of hysterectomy in this study was high, the outcome was good with low mortality rate. Effective medical and conservative management for benign conditions of the uterus should always be considered and hysterectomy should only be

done when strictly indicated.

Key Words: Audit, hysterectomy, Kano

INTRODUCTION

Hysterectomy is the surgical removal of the uterus.¹ It is indeed the most frequently performed major gynaecological operation the world over.² Rates are highest in the industrialized world with an incidence of 42/100,000, 143/100,000 and 236/100,000 in the UK, USA and Germany respectively.³

Globally, over 1.2million women can expect to undergo this form of surgery annually.³ One in five women will experience the operation at some point in their lives.³

In Africa and Nigeria in particular, there are a lot of misconceptions regarding hysterectomy which make it relatively unacceptable to our women; these misconceptions include loss of sex drive and reincarnation without the uterus.⁴ Incidences of 5.1%, 10.7% and 7.8% were reported in Kano, Gombe and Accra respectively.^{5,6,7}

Although hysterectomy is the treatment for most gynaecologic malignancies, the vast majority of hysterectomies are performed for benign gynaecological conditions.⁸ The leading indication in most studies is symptomatic uterine fibroid. Other indications include dysfunctional uterine bleeding, uterovaginal prolapse, endometrial hyperplasia, endometriosis, adenomyosis, cervical intraepithelial neoplasia, chronic pelvic pain and reproductive system cancers such as uterine, cervical, ovarian and endometrial cancers.

The procedure can also be done prophylactically against reproductive tract cancers especially in those with a strong family history such as breast cancer with BRCA1 or 2 mutations.⁹

The most commonly performed hysterectomy

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is total hysterectomy, which entails complete removal of the uterus and cervix. Other types of hysterectomy are subtotal in which the cervix is preserved, hysterectomy with bilateral salpingo-oophorectomy and radical hysterectomy, which is commonly done for malignant conditions. Abdominal hysterectomy is the most common surgical approach followed by vaginal hysterectomy¹⁰. Newer techniques include laparoscopically assisted abdominal hysterectomy.¹¹ The laparoscopic techniques are associated with fewer complications and shorter duration of hospital stay. Laparoscopic procedures are not yet commonly done in Nigeria because very few gynaecologists have acquired the skill.⁴ Akintobi AO et al have reported a case of laparoscopic supracervical hysterectomy in Abuja, Nigeria.¹²

Common complications of the procedure include haemorrhage leading to anaemia, pyrexia, and infection. Other complications include ureteral injury, thrombosis, premature menopause, bladder and bowel injury, vaginal prolapse, impaired sexual function, adhesions formation and bowel obstruction.^{9,10}

Risk of complications is highest with hysterectomies done for obstetric complications. In Nguru 50% of vaginal hysterectomies were found to be complicated by urinary tract infection.¹³ In Port Harcourt however, anaemia was the commonest complication at 68.2%.¹⁴

Emergence of effective medical and conservative treatment for benign conditions of the uterus is now posing a question mark regarding the justification of hysterectomy. Studies have shown that after hysterectomy women suffer bothersome psychosexual dysfunctions and increased incidence of vaginal prolapse due to deficiency of supporting ligaments.¹⁰ It has also been hypothesized that ovarian endocrinal function wears off more rapidly after removal of their target organ. Mean age of onset of menopause in those who underwent hysterectomy is 3.7yrs earlier than average,

even when the ovaries are preserved.¹⁰

The aim of this study is therefore to determine the current data regarding the indications and complications of hysterectomy in Aminu Kano Teaching Hospital, and compare it with previous studies at the same center.

METHODOLOGY

The study was a retrospective study of the hysterectomies done at Aminu Kano Teaching Hospital, Kano, Nigeria in a span of 2 years; between 1st Jan 2015 and 31st Dec 2016.

The patients' identification data were retrieved from the theatre operation register. Their case notes were retrieved from the medical record department of the hospital and a proforma was used. There were no exclusion criteria. Data was collected on patients' characteristics, indication for surgery, approach, complications, and length of hospital stay.

Elective as well as emergency hysterectomies were analyzed. Abdominal hysterectomies included total abdominal hysterectomy (TAH), subtotal abdominal hysterectomy (STAH) and hysterectomy with unilateral (TAH + USO) or bilateral salpingo-oophorectomy (TAH + BSO). Hysterectomies done as a part of staging laparotomy for ovarian tumor were included. Vaginal hysterectomy was mainly vaginal hysterectomy with pelvic floor repair (VH + PFR). Laparoscopic hysterectomy is not done in the hospital.

Intraoperative blood loss, injury to vital structures, and other complications were compared among various approaches. Pyrexia was defined as postoperative temperature of $\geq 38^{\circ}\text{C}$ on 2 consecutive days after the first day of surgery. Wound infection was defined as local erythema or suppuration. Anaemia was defined as PCV $< 30\%$.

The postoperative histopathology diagnosis was recorded. Preoperative indication was compared with the pathologist's report after surgery.

The data was analyzed using Microsoft excel. Quantitative variables were described using mean and standard deviation. Qualitative

variables were presented as percentages in tables, charts and pictograms.

RESULTS

During the study period, 385 major gynaecological surgeries were performed and 70 of these were hysterectomies. The prevalence of hysterectomy was found to be 18.18%. Fourty seven case notes were retrieved giving a retrieval rate of 67.14%.

The mean age at hysterectomy was found to be 48.38 ± 10.7yrs. The age range was between 25 and 78yrs. The peak incidence

was amongst those between 40 and 49yrs (Table 1). The rate of hysterectomy was found to be highest amongst grand multiparous women, the mean parity was 5.9 ± 3.3 (Table 1).

Symptomatic uterine fibroid was the leading indication for hysterectomy in Aminu Kano Teaching Hospital and it accounted for 29.8% (Figure 1). Overall, benign indications accounted for 61.7%, gynaecological malignancies accounted for 27.7% and obstetric complications accounted for 10.6%. Amongst the malignancies, ovarian tumor

TABLE 1: SOCIODEMOGRAPHIC CHARACTERISTICS

AGE GROUP	FREQUENCY	PERCENTAGE
<30	2	4.3
30-39	5	10.6
40-49	18	38.3
50-59	16	34.0
60-69	3	6.4
>/70	3	6.4
Total	47	100

PARITY	FREQUENCY	PERCENTAGE
0	4	8.5
1-4	14	29.8
>/5	29	61.7
Total	47	100

FIGURE 1: INDICATIONS FOR HYSTERECTOMY

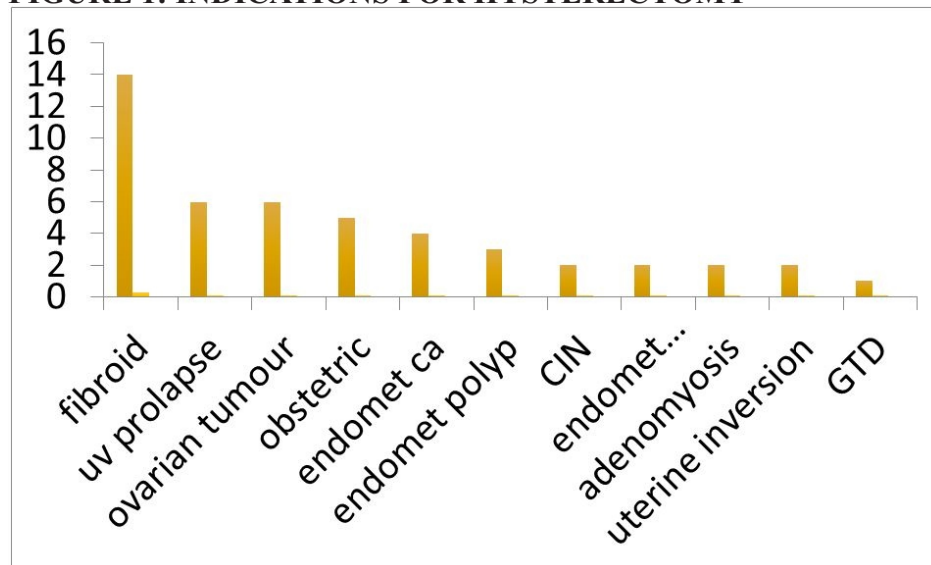


FIG 2: LENGTH OF HOSPITAL STAY VS TYPE OF HYSTERECTOMY

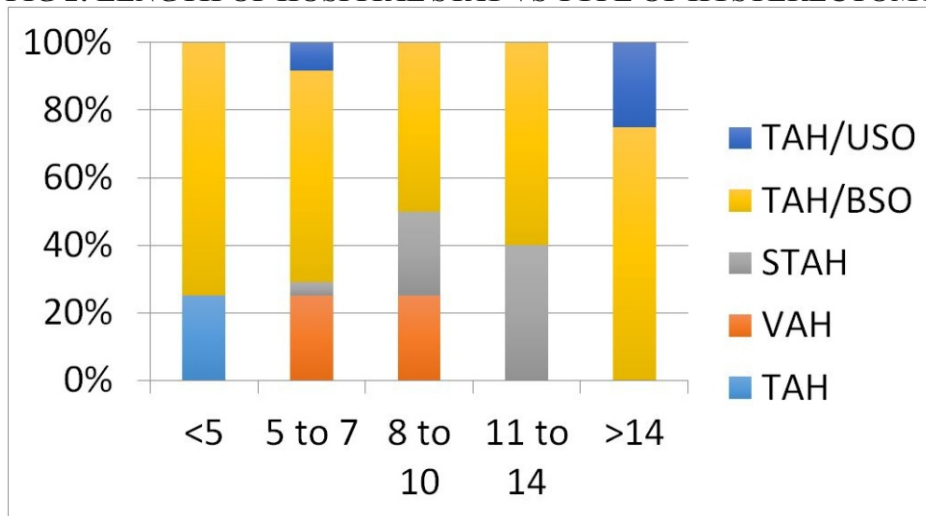
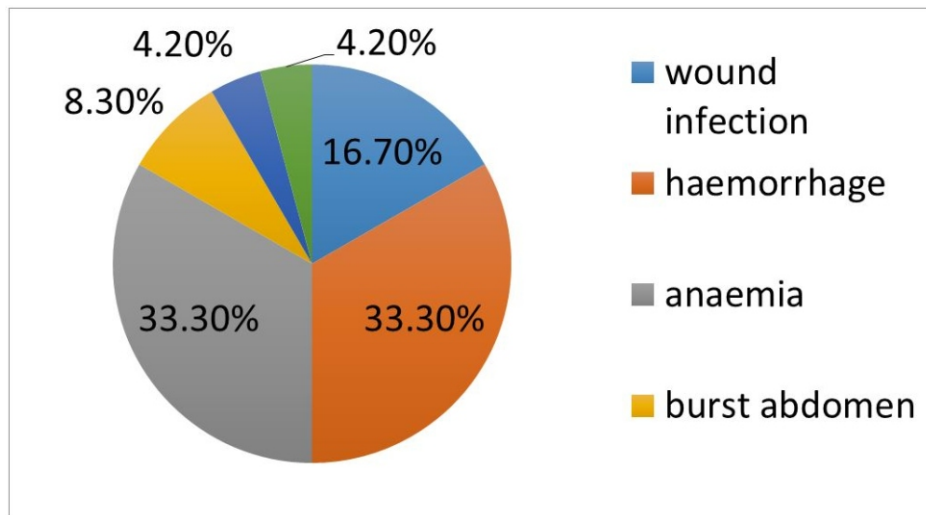


FIG 3: % COMPLICATION RATES



was the commonest indication accounting for 12.7%. The most frequent obstetric complication leading to hysterectomy was ruptured uterus constituting 60%, primary postpartum haemorrhage and Couvelaire uterus accounted for 20% each. Most of the hysterectomies were done as elective procedures (87.2%) and mainly via the abdominal route (83%). The ratio of abdominal to vaginal approach was 4.9:1. Total abdominal hysterectomy and bilateral salpingo-oophorectomy was the most commonly performed type of hysterectomy (57.4%). Laparoscopic forms of the procedure are not done in AKTH. All the vaginal hysterectomies were performed by consultants. Six out of the 7 subtotal abdominal hysterectomies were

performed by senior registrars. Most of the patients (62.2%) were discharged within 7 days. Majority of the patients (77.8%) who stayed for ≥ 11 days were cancer patients who had TAH+BSO (Figure 2)

Twenty-four out of the 47 patients had complications giving a complication rate of 51%. The most common complication was haemorrhage, 33.30 % (Figure 3). Two out of the 47 patients died giving a mortality rate of 4.3% and both were obstetric patients. The average duration of surgery was between 1 and 2 hours (81.5%). All the cases that lasted for more than 2hrs were complicated cases and performed by the consultants. In all the obstetric cases, blood loss was more than 1 liter. However, the average estimated blood loss was less than 500mls. Blood loss was

FIG 4: BLOOD LOSS VS ROUTE OF SURGERY

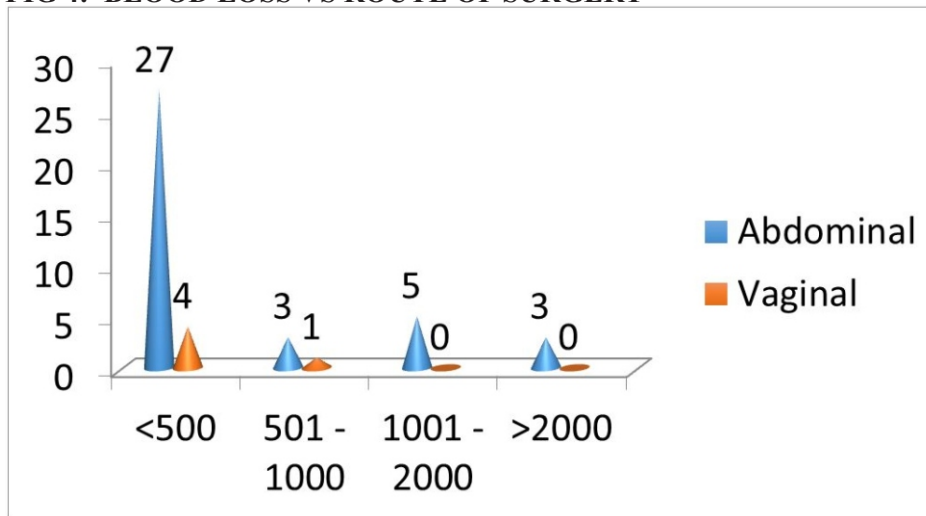
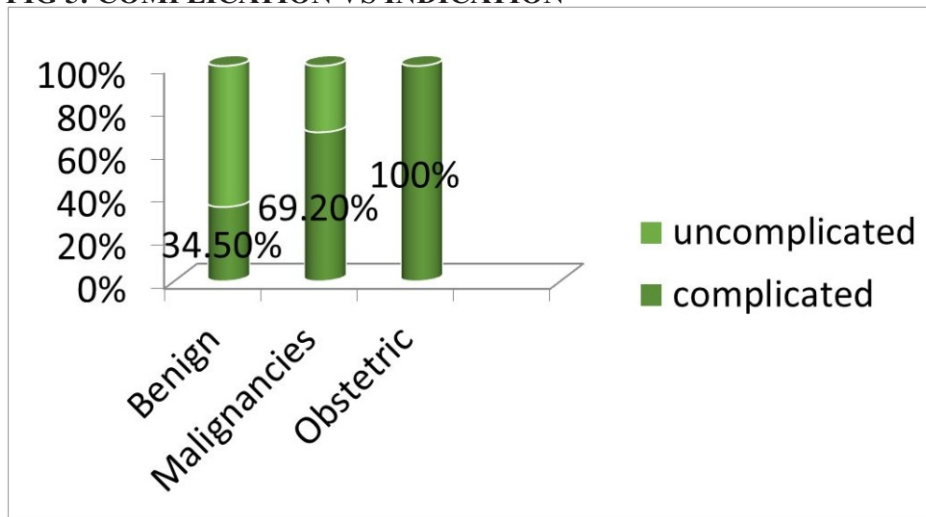


FIG 5: COMPLICATION VS INDICATION



higher via the abdominal surgeries, all the patients who lost more than 1 liter of blood had abdominal hysterectomy (Figure 4). In general, most of the complications occur while performing hysterectomy for obstetrics reasons (Figure 5).

The histological diagnosis corresponds with the preoperative diagnosis in 72.7% of cases (Figure 6). The commonest diagnosis was leiomyoma. Multiple histopathological findings were observed in 22.7%.

DISCUSSIONS

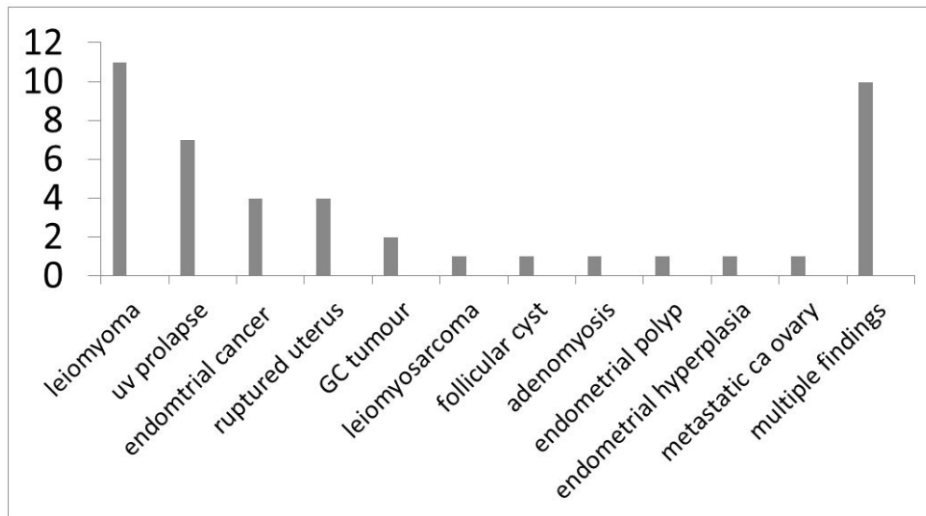
The prevalence of hysterectomy in this study was 18.18%, this is lower than 25% reported by Usman et al in Nguru¹³ and three times higher than 5.1% reported by ZD Ahmed⁵ in Aminu Kano Teaching Hospital. This can be

attributed to an increase in awareness of our women and positive change in attitude towards health seeking behavior hence making the procedure more acceptable. Also more cancer patients are now presenting with operable disease. The previous study in Kano excluded obstetric indications.

The mean age at hysterectomy was 48.38 ± 10.7 yrs. This is similar to 49.9 ± 11.3 yrs reported by Alegbejo in Port Harcourt¹⁴ but higher than 45.7 ± 11 yrs reported in Gombe⁶. The mean parity in this study was 5.9 ± 3.3 . This is comparable to 5.5 ± 3.7 yrs reported by Bukar M⁶ but higher than 4.2 ± 2.4 reported by Alegbejo in Southeastern Nigeria¹⁴. This can be explained generally by the higher parity of women in Northern Nigeria.

Hysterectomy was commonest among grand

FIG 6: HISTOPATHOLOGICAL FINDINGS



multiparas at 61.7% and least among the nulliparas at 8.5%. Common indications in the nulliparas being uterine fibroid and malignancies. This is similar to 62.1% reported by ZD Ahmed⁵.

The mean parity in this study was 5.9 ± 3.3 . This is comparable to 5.5 ± 3.7 years reported by Bukar M⁶ but higher than 4.2 ± 2.4 reported by Alegbejo in Southeastern Nigeria¹⁴. This can be explained generally by the higher parity of women in Northern Nigeria.

The percentage contribution of fibroid to the overall indications has however decreased from 62.3% reported by ZD Ahmed⁵ in 2013 to 29.8% in this study while that of the malignancies has increased from 15.3% to 25.5% in this study. Overall, benign conditions accounted for 61.7%, gynaecological malignancies constituted 27.7% while 10.6% were obstetric complications.

Total abdominal hysterectomy is the most commonly performed type of hysterectomy accounting for 68.1%. This agrees with the findings of various other studies⁵⁻¹⁵. Subtotal abdominal hysterectomy is only favoured at Cesarean hysterectomy for fear of cancer of cervical stump. Vaginal hysterectomies are mainly done for uterovaginal prolapse.

The ratio of abdominal to vaginal hysterectomy in this study was 4.9:1. This is similar to 5:1 reported by Oyawole AA in Ilorin¹⁷ and 4:1 reported by Onah in Enugu¹⁸. Laparoscopic forms of the procedure are not

yet commonly done in Nigeria because very few gynaecologists have acquired the skill and also due to lack of therapeutic laparoscopies. However there are some private facilities that offer laparoscopically assisted hysterectomy

During the study period, 72.3% and 27.7% of the hysterectomies were performed by consultants and senior registrars respectively. This is comparable to 78.6 and 21.4 reported by ZD Ahmed⁵.

However, none of the vaginal hysterectomies was performed by a senior registrar. This shows underexposure of residents-in-training in the art of vaginal hysterectomy. This is same as the finding of Onah HE in Enugu.¹⁸ Duration of hospital stay was variable in the study. Eighty percent of the patients were discharged within 10 days of surgery and only 8.5% spent less than 5 days. This is contrary to 69% hospital stay of less than 5 days reported by Adanu in Ghana⁷.

The complication rate in this study was 51%. This is twice that reported by Usman at 26% in Nguru and is 4 times that reported by Maresh MJ in India at 12.5%^{13,16}. This could be accounted for by the obstetric indications included in this study and also the rising contribution of malignancies to the prevalence of hysterectomy.

Primary haemorrhage and anaemia were the commonest complications accounting for 33.3% each. This is similar to the findings of Usman,¹³ Alegbeje¹⁴ and Yusuf¹⁵ in Nguru,

Port Harcourt and Lagos respectively. However, this is contrary to the findings of Ahmed ZD and Bukar M who reported postoperative pyrexia and wound infection respectively^{5,6}. This can be explained by the improvement in antibiotic prophylaxis and surgical asepsis after the previous study thereby decreasing the incidence of wound infection. The rising prevalence of hysterectomies done for gynaecological malignancies and obstetric indications included in this study accounted for haemorrhage and anaemia. Risk of complication was highest with hysterectomy done for obstetric complications. Haemorrhage can be attributed to the increased blood supply to the uterus in pregnancy and especially at term.

Ureteric injury was not observed during the study period because all cases with uterine size more than 20 weeks had ureteral stents inserted during the procedure.

Two mortalities were recorded both due to obstetric complications (ruptured uterus), giving a crude mortality rate of 4.3%. This is much higher than 1.8% reported by Yusuf AO¹⁵ who excluded obstetric complications in their studies.

About 80% of the surgeries lasted for 1-2hrs. Blood loss was less than 500mls in 3 quarters of the patients and was higher in those who had abdominal hysterectomy. The commonest histopathological finding was leiomyoma at 36.4%. This agrees with the finding of uterine fibroid as the commonest indication for hysterectomy at 29.8%. Two cases of leiomyoma were incidental findings. Multiple histopathological findings were observed in 22.7%. Two cases of leiomyoma co-existed with endometrial hyperplasia, three other cases of leiomyoma co-existed with endometrial polyp, chronic cervicitis and Squamous cell carcinoma of the vaginal vault respectively. In 72.7% of cases, the histopathological findings were consistent with the preoperative diagnosis.

CONCLUSION

The rate of hysterectomy at Aminu Kano Teaching Hospital has tripled over the last

two years. Traditional abdominal hysterectomy remains the main surgical approach; vaginal hysterectomy is and laparoscopic procedures are less invasive, have shorter hospital stay and are associated with less complications.

RECOMMENDATIONS

Consultants in our various hospitals should be sponsored for training on laparoscopic hysterectomies and necessary equipment for such procedures should be provided. There should be adequate exposure of residents-in-training in the art of vaginal hysterectomy. Therapeutic hysteroscopy should also be provided through which conservative measures such as endometrial ablation, myoma coagulation and myolysis can be done. There should also be collaboration with radiology department to select patients suitable for uterine artery embolization. Follow up period should be extended to > 12months to enable evaluation and detection of vault prolapse and also to assess the impact of hysterectomy on sexual life.

LIMITATIONS

1. Vital aspects of patient data e.g. educational status and follow up on sexual life postoperatively were missing thus hindering determination of impact of educational status on choice of hysterectomy and effect of hysterectomy on sexual life respectively.
2. Difficulty retrieving folders from record office and missing folders.

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