

Hysterectomy for Uterine Fibroids in Nullipara at Korle Bu Teaching Hospital, Ghana

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Abstract

Introduction: Uterine fibroids are common in Ghana and they constitute about 40% of the major gynaecological operations in Accra.

Objective: To determine the factors predisposing nullipara to hysterectomy.

Design: A retrospective case-control study.

Setting

The Korle Bu Teaching Hospital, Accra, Ghana between January 2002 and September 2003

Method

A study of nullipara who had surgery for uterine fibroids. Data were extracted from operation records, patient clinical notes and histopathology reports. Comparisons were made using chi squared and t tests

Results

Thirty eight hysterectomy cases and 52 myomectomy controls were studied. Only 3 (7.9%) of the hysterectomies were planned before surgery. The commonest reason for unsuccessful myomectomy was big uterine size and poor architecture. Hysterectomy cases were older ($p < 0.002$) and had bigger uteri ($p < 0.001$) than myomectomy controls. Complaints of abdominal distension (OR: 38) and menorrhagia (OR: 11.8) were the two factors that significantly increased the odds of hysterectomy.

Conclusion

A large proportion of nullipara scheduled for myomectomy could end up with a hysterectomy. Careful and detailed counseling before planned myomectomy is needed to prevent regret, litigation and major psychological trauma.

Key Words: Ghanaian, nulliparous, fibroids, hysterectomy, litigation

Introduction

Uterine fibroids are common in Ghana. They form about 10% of admissions to the gynaecological ward and 40% of the major gynaecological operations at the Korle Bu teaching Hospital in Accra, Ghana¹.

Uterine fibroids are associated with a range of gynaecological and social problems. While the gynaecological problems involve the known complications of fibroids, the social problems are usually related to fertility. Gynaecologists first do their utmost to preserve the uterus in women who have not completed their families during surgery for uterine fibroids in order to maintain reproductive function. Emotional trauma following the removal of the uterus should be minimized or prevented by effective pre- and postoperative counseling². This would also lead to minimization of litigation.

One reason why myomectomy is unsuccessful is excessive haemorrhage. In order to ensure conservation of the uterus, myomectomy is often carried out using techniques to minimize bleeding such as the application of a tourniquet around the infundibulopelvic ligaments and uterine arteries to reduce blood flow to the uterus³; the use of vasopressin to reduce blood loss³; or the prior administration of gonadotropin releasing hormone (GnRH) analogues that cause shrinkage of the nodules⁴. Radiologic embolization of the uterine arteries⁵ can be

performed to cause shrinkage of the fibroids and avoid surgery completely.

The epidemiology and aetiology of uterine fibroids in Ghana have not been critically studied and documented. The management options are also limited because of logistics. Therefore some women who undergo hysterectomy might benefit from some conservative management option apart from myomectomy such as uterine artery embolisation that would give a chance at childbearing. Nulliparous women are an obvious group which would like to avoid hysterectomy at all costs. The stress of life after hysterectomy for nulliparous women as well as the social and legal consequences have not been studied and documented in Ghana. Despite all the attempts at myomectomy, some nullipara undergo hysterectomy and this study was to identify the possible factors that predispose nulliparous women to hysterectomy.

Methods

This is a retrospective case-control study comparing 38 hysterectomies and 52 myomectomies performed on

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nulliparous women between January 2002 and September 2003 at the Korle Bu Teaching Hospital. The Korle Bu Teaching Hospital is the foremost hospital in the capital city Accra, which has a population of 3 million. The hospital serves as a tertiary referral centre. Nulliparous women who had surgery for uterine fibroids were identified from the gynaecologic theatre records. Ninety-eight such women were identified. Further information on these women was obtained from inpatient ward records and histopathologic records. The age, parity, marital status and presenting complaints were noted. Also noted were the types of operations performed, the size of the uterus and histopathological findings. Patients were excluded from the study if they

did not have complete information were excluded from the study.

Enquiries were made from the hospital administration about any litigation in connection with any of the 90 women in the study.

The data obtained were entered and analyzed using Statistical Program for the Social Sciences (SPSS, Chicago Illinois) version 10.0. The Student's t test was used to compare means and chi square tests were used to compare proportions. Crude odds ratios for hysterectomy compared to myomectomy were calculated. A p value of <0.05 was considered to be significant.

Table 1: Comparison of hysterectomy cases and myomectomy controls among nullipara from Korle Bu Teaching Hospital, January 2002 to September 2003

Characteristic	Hysterectomy Cases	Myomectomy Controls	p-value
Total number	38	52	
Mean age (years)	36.1	33.1	0.002
Mean uterine size (weeks)	26.1	18.2	<0.001
Currently married (%)	21.1	25.0	0.06
Preoperative evaluation			
Hb < 11g/dl (%)	44.7	44.2	0.92
Hypertension (%)	7.9	9.6	0.78
Diabetes (%)	5.3	5.8	0.92
Urinary Tract Infection (%)	2.6	1.9	0.82
Presenting complaints			
Abdominal distention (%)	100.0	50.0	<0.001
Infertility (%)	100.0	100.0	1.00
Pain (%)	71.1	59.6	0.26
Menorrhagia (%)	73.7	19.2	<0.001
Urinary retention (%)	10.5	0.0	0.02
Pseudocyesis (%)	10.5	0.0	0.02

Results

Of the 98 nullipara who were identified 39 (39.8%) had hysterectomy performed and 59 (60.2%) had myomectomy performed. One hysterectomy case (2.6%) and 7 myomectomy controls (11.9%) were excluded on account of incomplete data.

Table 1 shows the comparison of characteristics between the 38 hysterectomy cases and the 52 myomectomy controls. Patients who had hysterectomy performed were significantly older than those who had myomectomy and the uterus was significantly larger for the hysterectomies than for the myomectomies. Abdominal distension, menorrhagia, urinary retention and pseudocyesis were significantly more among the nullipara who had a hysterectomy than among those with a myomectomy.

Of the 38 hysterectomies, 35 (92.1%) were initially planned to have a myomectomy. The reason for an initial

planned hysterectomy was because of closeness to menopause in all 3 cases. These women were the only ones who had an accompanying bilateral salpingo-oophorectomy performed. Six women (1.6%) had a unilateral salpingo-oophorectomy performed. The main reason for conversion to a hysterectomy intraoperatively was a large uterus with destruction of uterine architecture. Table 2 shows the different reasons for the hysterectomies.

All the 52 patients who had myomectomy performed had the diagnosis of uterine fibroids confirmed by histopathology. One (2.6%) of the patients who had a hysterectomy was diagnosed as adenomyosis on histopathology and 1 (2.6%) had both adenomyosis and uterine fibroids. Other accompanying diagnoses in the hysterectomy cases were chronic cervicitis (10.5%), chronic salpingitis (15.8%) and simple ovarian cysts (2.6%).

Table 2:
Reasons for hysterectomies performed among nullipara at Korle Bu Teaching Hospital, January 2002 to September 2003

Reason	Number (%)
Big size and poor architecture	19 (50.0)
Dense pelvic adhesions	9 (23.7)
Intractable haemorrhage	7 (18.4)
Closeness to menopause	3 (7.9)
Total	38 (100.0)

There was a claim for compensation due to “wrongful” hysterectomy performed for a 41 year old woman who had presented with a big uterine fibroid and severe anaemia. Myomectomy could not be performed because of loss of architecture at surgery.

Table 3 shows the odds of having a hysterectomy performed based on presentation and pre-operative evaluation. Complaints of abdominal distension or menorrhagia significantly increased the odds of a hysterectomy being performed. There was insufficient information on the intraoperative assessment of anatomy and adhesions for the myomectomy controls. It was therefore not possible to compute the odds of having a hysterectomy performed based on intraoperative assessment.

Discussion

This retrospective case-control study shows that of 87 nullipara scheduled for myomectomy, 38 (43.7%) had a hysterectomy performed. The chief reason for a failed myomectomy was big uterine size and poor architecture. Women who had hysterectomy performed were significantly older and had bigger uteri than those who had myomectomy. Presenting complaints of abdominal distension (OR: 38 CI:5.4-1597.5) or menorrhagia (OR:11.8 CI:3.92-36.18) significantly increased the odds of a woman having a hysterectomy performed. The role of intraoperative findings in influencing the decision for a hysterectomy is implied from the results but this could not be statistically analysed due to insufficient data.

This study provides a quick way of assessing the factors that predispose nullipara to a hysterectomy thereby providing information that would be immediately

useful for patient counseling. The study design is also very useful in the Ghanaian setting where patient follow-up is difficult and research funds are not easily available. The study could however suffer from information bias. A greater proportion of myomectomy controls than hysterectomy cases were excluded as a result of missing data. This differential loss of subjects could result in our calculated odds ratios being either greater or less than the true value depending on the nature of the missing data. The highly positive associations obtained from the study is however not likely to be greatly affected by this missing information. Since the clinical records of the patients were not recorded on a standard form it is possible that detailed information could have been recorded only in cases where a myomectomy was unsuccessful. This would tend to increase the observed odds ratios. The study design however avoids the problem of recall bias since all information was obtained from pre-existing records. Since all nullipara undergoing surgery for fibroids were studied, the study design avoids selection bias.

The proportion of nullipara scheduled for myomectomy who end up with a hysterectomy at Korle Bu teaching Hospital is lower than the 68% reported by Mahbouli et al ⁶ from Tunis. Omu et al ⁷ in their study in Nigeria found that almost 68% of all women who had major surgery ended up with a hysterectomy. However, it cannot be inferred that this proportion is uniform across all parity groups. The differences in the results for success rate of planned myomectomies might be due to patient selection and the techniques and expertise of the gynaecologists. In Accra the tourniquet method described by Wallach ³ is employed to keep intraoperative blood loss at a minimum. Gynaecologists in Korle Bu do not use GnRH analogues since these medications are expensive and their cost effectiveness has not been demonstrated ⁸. Hysteroscopic resection and endometrial ablation of submucous fibroids as described by Garcia ⁸ is also not practiced in Accra.

The presence of intercurrent medical conditions in approximately 60% of both cases and controls emphasizes the importance of pre-operative evaluation. It is recommended that patients with major medical

Table 3: Odds ratios for hysterectomy among nullipara at Korle Bu Teaching Hospital based on presenting complaints and pre-operative evaluation

Characteristic	Odds ratio (95% confidence interval)	p- value
Hb < 11g/dl	1.02 (0.40-2.57)	0.96
Hypertension	0.81 (0.12-4.47)	0.78
Diabetes	0.91 (0.07-8.40)	0.92
Urinary tract infection	1.38 (0.02-110.3)	0.82
Abdominal distension	38.0 (5.4-1597.5)	<0.001
Infertility	0.73 (0.01-58.90)	0.83
Pain	1.66 (0.63-4.54)	0.26
Menorrhagia	11.8 (3.92-36.18)	<0.001

conditions should be treated before major surgery^{9,10}. Treatment of some of these conditions might require referral.

The significantly higher mean age among the women having hysterectomy could be a reflection of delay in reporting to the gynaecologist. This delay has been shown from this study to increase the odds of having a hysterectomy instead of a myomectomy. The low rate of marriage and universal complaint of infertility among the nullipara in this study agrees with the findings by Araoye² who reported that marital disharmony, high divorce rate and the stress of single life characterized women presenting with infertility in West Africa.

The significantly larger uterine size for hysterectomy cases, the chief reason of big uterus and poor architecture for hysterectomy and the high odds ratio of a complaint of abdominal distention for hysterectomy together suggest that the main intraoperative consideration leading a surgeon to decide between myomectomy and hysterectomy is uterine size.

The findings of this study suggest that nulliparous women who are above 35 years or who complain of significant abdominal enlargement with a uterus bigger than 26 weeks size or who complain of menorrhagia should be counseled in detail about the increased risk of ending up with a hysterectomy. In such cases the gynaecologist should only embark on surgery after being fully satisfied that the patient has come to terms

with the management possibilities. The study also brings out the need for continued education on early reporting of symptoms of uterine fibroids especially in nullipara in order to be able to have a myomectomy successfully performed.

This study has not been able to satisfactorily address the question of intraoperative findings that predispose a nulliparous woman to having a hysterectomy. The role of socio-demographic factors has also not been fully addressed. The need for a prospective case-control study to answer these questions is therefore highlighted. Such a study would be able to obtain more detailed information and not suffer from as much information bias as the current study.

Conclusion

Up to 40% of nulliparous women presenting with uterine fibroids may end up with hysterectomy despite their reproductive desires so prior informed consent is mandatory. There should be careful preoperative evaluation to exclude co-existing medical conditions. Counselling should be vigorously pursued at every stage of the management in order to reduce the stress of childlessness and litigation. There is also the need for research into other appropriate and cost-effective methods of treating uterine fibroids in Accra. This would enable us offer the best care to nulliparous women with uterine fibroids who desire to retain their full reproductive ability.

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