Outcomes of Abdominal Myomectomy in Rivers State University Teaching Hospital, Port Harcourt: A 5-year review

ABSTRACT

Background:

Abdominal myomectomy is a common surgical option for the treatment of symptomatic uterine fibroids in women who wish to preserve their uterus. This study highlights the outcomes of abdominal myomectomies done in the Rivers State University Teaching Hospital (RSUTH).

Method:

This was a retrospective cross-sectional study of all abdominal myomectomies done in this RSUTH between January 2017 to December 2021. Records from the theatre register, anaesthetic charts, patients' case notes and gynaecological ward were reviewed and the data obtained were analyzed using SPSS version 20.

Results:

A total of 540 women had surgery for uterine fibroids. Of these 512 (94.8%) had an abdominal myomectomy while 28 (5.2%) had a hysterectomy. A total of 315 (61.5%) fibroid cases had myomectomy due to infertility/ recurrent miscarriages, 129 (25.2%) for menorrhagia, 52 (10.2%) for huge abdominal/pelvic mass, and 16 (3.1%) for pressure symptoms. A total of 212 (41.4%) had satisfactory outcomes while 300 (58.6%) had complications. The majority (78%) of the perioperative complications were wound sepsis/dehiscence 127 (42.3%) and anaemia 108(36.0%). Other less common complications were fever, massive intraoperative haemorrhage (>1.5L), intestinal obstruction (paralytic ileus), iatrogenic bowel injury and anaesthetic complications. No death was recorded.

Conclusion:

Abdominal myomectomy is one of the most common treatments for symptomatic uterine fibroids. It generally has a favourable outcome, though significant perioperative complications can occur. Hence appropriate precautions should be taken to minimise these complications.

KEYWORDS: Abdominal Myomectomy, complications, RSUTH

Introduction

Uterine fibroids, also known as leiomyomas, are the commonest benign tumours of the uterus[1]. They have a genetic predisposition and are more common in blacks and nulliparous women[1,2]. over 40% of first-degree female relatives of women with leiomyoma will develop fibroids sometime during their lifetime[1,2]. Uterine fibroids may or may not present with symptoms[3]. An accurate estimate of the prevalence of uterine fibroids is difficult since a significant proportion of women are asymptomatic and will not present to the hospital[2,4].

The management of fibroids depends on the age, the severity of symptoms and the desire for fertility[3]. Management may be expectant, medical, surgical or radiological.[3,5] Surgical management is reserved for women with huge fibroids, severe symptoms or who have failed medical treatment. Surgical interventions for uterine fibroids include myomectomy, hysterectomy or myolysis.[3,5] Myomectomy is the most common surgical intervention for uterine fibroids [3,5]. It is done in women with significant symptoms who are desirous of fertility or wish to retain their uterus. Studies have shown that myomectomy is a safe alternative to hysterectomy for women who wish to preserve their reproductive functions, with no significant difference in perioperative morbidity[3,5].

Myomectomy is commonly done through the abdominal route, though it can also be done through the vaginal, laparoscopic or, hysteroscopic routes[5,6]. Infertility with coexisting uterine fibroids is a major indication of abdominal myomectomy [5,7]. Other indications are heavy menstrual bleeding, recurrent pregnancy losses, abdominal swelling, Pressure symptoms like urinary frequency, urinary retention, leg swelling, or dysmenorrhea. Increasingly, women present in the gynaecological clinic with uterine size above 20weeks[5,7].

Complications include anaesthetic complications, like aspiration pneumonitis, anaphylaxis, malignant hyperthermia, hypoxic brain injury, cardiovascular collapse, and cardiac arrest. Intraoperative and postoperative haemorrhage, trauma to bladder, ureter, intestines or rectum, infection, pelvic collection, wound dehiscence, thromboembolism and intestinal obstruction. [1,2,3]. Some patients are re-admitted due to late complications[8.9]. Death may also occur[8.9].

To minimize perioperative morbidity, women going for myomectomy in RSUTH are optimised before the surgery. Their packed cell volume (PCV) is improved with haematinics (or blood when indicated) to at least 30% before surgery. Blood is usually provided for the surgery and basic investigations like full blood count, Electrolyte urea and creatinine, liver function test, urinalysis and retroviral screening are done before the surgery. Preoperative prophylactic antibiotics are usually given and regional anaesthesia is commonly used for the surgery. The women also receive prophylactic postoperative antibiotics and are encouraged to ambulate early[3,5,8].

More complex methods like high intensity focused ultrasound (HIFU) are yet to gain popularity[6], due to a lack of skilled manpower and lack of appropriate equipment.

Study Aims and Objectives

This study aims to highlight the outcome of abdominal myomectomy in RSUTH. It is the commonest surgical intervention (94%) for all cases of symptomatic uterine fibroid in this facility. This study will also highlight the indications and complications of myomectomy in our facility.

Method

This is a retrospective cross-sectional study of abdominal myomectomy cases done in the Rivers State University Teaching Hospital [RSUTH] from January 2017 to December 2021. The RSUTH is situated in Port Harcourt and receives referrals from both public and private hospitals within Port Harcourt and its environs. Port Harcourt is the capital of Rivers State, which is the sixth most populous state in Nigeria with a population of 7,303,924 according to the 2016 national bureau of statistics projected population[10].

Records of patients who had surgeries for uterine fibroids from the theatre register, anaesthetic charts, patients' case notes and gynaecology ward were reviewed. Data were collected for those who had abdominal myomectomy while other surgical interventions were excluded.

Data Analysis

The data obtained were entered into a spreadsheet of SPSS version 20 and analysed. The data were summarised in tables as frequencies and percentages.

Results

The total number of patients that had surgical intervention for symptomatic uterine fibroid from January 2017 to December 2021 was 540 as shown in table 1, of these 512 (94.8%) had abdominal myomectomy while 28(5.2%) had a hysterectomy.

Table 1: Yearly distribution of fibroid surgeries

Year	Number of patients (N=540)
2017	84 (15.5%)
2018	104 (19.3%)
2019	122 (22.6%)
2020	80 (14.8%)
2021	150 (27.8%)

Table 2: Yearly distribution of abdominal myomectomies

Year	Number of patients (N=512)
2017	83 (16.2%)
2018	99 (19.3%)
2019	112 (21.9%)
2020	75 (14.7%)
2021	143(27.9%)

The proportion of women who had abdominal myomectomy for uterine fibroid was highest (59.6%) in the age group between 31-35 years. Abdominal myomectomy was least (1.4%) in the age group > 40years More than 75% of these women were more than 30years and less than 25% were 30years and below. The majority (69.0%) of these women were nulliparous as shown in table 3.

Table 3: Sociodemographic characteristics of patients who had an abdominal myomectomy

Age (years)	**Number of patients (N=512)**
20-25years	13 (2.5%)
26-30years	95 (18.5%)
31-35years	305 (59.6%)
36-40years	92 (18.0%)
>40years	7 (1.4%)
Parity	
Nulliparous	353(69.0%)
Para 1	144(28.1%)
Multiparas	15(2.9%)
Marital status	
Married	487 (95.1%)
Single	25 (4.9%)
Religion	
Christianity	497(97.1%)
Islam	15(2.9%)
Employment status	
Employed	195 (38.1%)
Unemployed	169(33,0%)
Self-employed	148(28.9%)

Education status	
Primary	26(5.1%)
Secondary	235(45.9%)
Tertiary	251(49.0)

The majority (61.5%) of women had abdominal myomectomy for infertility/recurrent miscarriage, followed by heavy menstrual bleeding 25.2% as shown in table 4

Table 4: Indication for myomectomy:

Infertility/ recurrent miscarriages	315(61.5%)
Menorrhagia	129(25.2%)
Huge abdominal- pelvic mass	52(10.2%)
Pressure symptoms	16(3.1%)

A total of 212 (41.4%) had satisfactory outcomes following myomectomy while 300 (58.6%) women developed complications following myomectomy as shown in Table 5. The majority (78%) of the perioperative complications were wound sepsis/dehiscence 127 (42.3%) and anaemia 108(36.0%) as shown in Table 6, these were managed with appropriate antibiotics, haematinics and blood transfusion when indicated.

Outcome of myomectomy

Outcome of myomectomy	Number of patients (N=512)
Satisfactory outcome	212 (41.4%)
complications	300 (58.6%)

Perioperative Complications of Abdominal Myomectomy

Complications of Myomectomy	Number (N=300)
Wound sepsis/dehiscence	127 (42.3%)
Anaemia	108 (36.0%)
Fever	50 (16.7%)
Massive intraoperative haemorrhage (>1.5L)	7 (2.3%)
Intestinal obstruction (paralytic ileus)	5(1.7%)
Bowel injury	2 (0.7%)
Anaesthetic complication	1(0.3%)

Discussion

Uterine fibroids are a common benign tumour in women of reproductive age[1]. The highest prevalence of myomectomy (59.6%) in this study was in the age group of 31-35years. This may be due to greater fertility concerns around this age, as most women would have completed their education by this age, got married and start desiring conception. Also, The lowest prevalence of myomectomies (1.4%) was in the age group of >40years. This may be because many women >40years are multiparous and will benefit more from a hysterectomy than a myomectomy, as the risk of recurrence, and cancer of the endometrium and cervix are eliminated with hysterectomy. Both findings were consistent with the findings in south-east[11] and north-central[12] Nigeria. The majority (≥95%) of women who had myomectomy were married and between the age of 26 and 40years, which is similar to the findings of other studies in Nigeria[11-13]. This may be because married women in this age group are more likely to desire conception.

Many (69%) of the women in this study were nulliparous similar to other studies in Nigeria[11,12]. There is an inverse relationship between parity and the development of uterine fibroids, as ischemia of the uterus during parturition and postpartum uterine remodelling leads to apoptosis of small uterine fibroids[14,15]

Infertility was the commonest indication for surgery in this study followed by menorrhagia, this was consistent with the study in northeastern nigeria[13]. Though fibroids may not be a direct cause

of infertility except when it occludes both cornua ends of the uterus, the removal of fibroids when other causes of infertility have been excluded may improve fertility[16].

Myomectomy is a relatively safe procedure, especially when done by experienced persons. In this study, 212 (41.4%) had satisfactory outcomes while 300 (58.6%) had perioperative complications. The satisfactory outcome in this study was substantially higher than that in north-central Nigeria[12] in which 23.5% has a satisfactory outcome. This improvement may be due to the cadre of anaesthetists and surgical staff that perform myomectomies in RSUTH. Myomectomies in RSUTH are performed by consultants or senior residents.

The majority (78%) of the perioperative complications were wound sepsis/dehiscence 127 (42.3%) and anaemia 108(36.0%) suggesting the need for an improvement in infection prevention protocol and optimisation of patients before surgery. However, intraoperative complications were rare in this study unlike studies from other parts of Nigeria which showed considerable intraoperative complications[11-13] reflecting the differences in the cadre of staff involved.

Conclusion:

Abdominal myomectomy is a relatively safe treatment for symptomatic uterine fibroids, especially when done by experienced persons. The commonest indications for this procedure were infertility/recurrent miscarriages and heavy menstrual bleeding. Perioperative infection and anaemia are common complications of this procedure hence adequate pre-operative optimisation of the patients and strict adherence to infection prevention protocols are advised.

ETHICAL APPROVAL

Ethical approval was obtained from RSUTH ethical research committee before the commencement of studies.

CONFLICT OF INTEREST

The authors declare that there were no conflicts of interest.

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