

## ORIGINAL ARTICLE

## Myomectomy in a Secondary Health Centre in Awka, South-East Nigeria

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Received August 8<sup>th</sup>, 2012

Accepted September 13<sup>th</sup>, 2012

## ABSTRACT

**Background:** Myomectomy, the surgical removal of fibroids from the uterus preserves both menstrual and reproductive functions and is practiced worldwide.

**Objective:** To evaluate the clinical presentations, indications and morbidities associated with myomectomy in a secondary healthcare facility in Awka, Southeastern Nigeria.

**Methodology:** This was a review of 62 cases of myomectomy at Amaku General Hospital, Awka, Nigeria over a 6-year period, 1<sup>st</sup> January 2004 to 31<sup>st</sup> December 2009. The data was extracted from their case notes and theatre records and analyzed using basic descriptive statistics and presented in tables and simple percentages.

**Results:** There were 456 gynaecological admissions during the period under review and 62 had myomectomy accounting for 13.6% of all gynaecological admissions. The age range of the patient was 18-46 years with a mean of 23.5±2.1 years. Clinical uterine size at presentation ranged from 12 weeks to 36 weeks with a mean of 20.2±6.5 weeks. Lower abdominal discomfort 20(33.9%) was both the commonest presenting complaint and indication for myomectomy. Fifty-six (94.9%) patients had abdominal myomectomy, while 3(5.1%) had vaginal myomectomy. Post-operative pyrexia 15(25.4%) was the commonest post-operative. No death was recorded.

**Conclusion:** Myomectomy is a safe surgical operation. There is need to encourage early presentation in order to reduce the morbidity associated with the surgery.

**Keywords:** Abdominal, fibroids, leiomyoma, morbidity, uterine

## INTRODUCTION

Uterine leiomyomas are the most common benign gynaecologic tumours affecting premenopausal women and they are often associated with considerable morbidity.<sup>1</sup> They are composed essentially of smooth muscle tissue but there is a variable amount of fibrous tissue.

The true incidence of uterine fibroid in any community is probably under estimated as majority of the cases are asymptomatic and undiagnosed.<sup>2</sup> However, studies report that

5.4 to 77 percent of women have uterine fibroid tumors, depending on the population studied and the diagnostic method used.<sup>3</sup>

The precise aetiology of uterine fibroids is unknown.<sup>4</sup> There are however definite racial factors; a nine fold greater incidence has been reported among black women where they tend to be larger, more numerous and produce more severe symptoms<sup>5</sup>. Clinical risk factors associated with fibroids include obesity, hypertension, nulliparity, polycystic ovarian syndrome, diabetes and heredity.<sup>2</sup>

The modalities of treatment are increasing and include expectant management, surgery, uterine artery embolization, myolysis, ablative techniques and medical treatment.<sup>4</sup> Surgical intervention is often indicated when symptoms such as menorrhagia, congestive dysmenorrhoea, urinary frequency, infertility and recurrent pregnancy losses occur.<sup>4</sup>

The surgical treatment is to a great extent influenced by the patients desire to preserve her uterus thereby presenting a peculiar problem in our environment where high parity is the norm.<sup>6</sup>

Hysterectomy though definitive in the management of uterine fibroids results in loss of menstrual and reproductive functions and consent for this surgery is not always freely given in our environment.<sup>6</sup> Myomectomy which is the surgical removal of fibroids from the uterus preserves menstrual and reproductive functions and is understandably preferred by women in the reproductive age.<sup>4,7</sup> Myomectomy could be carried out abdominally via laparotomy or laparoscopically and through the vagina using the hysteroscope.

Abdominal myomectomy is associated with increased intra operative blood loss, operating time, post-operative pain and a longer hospital stay.<sup>8</sup> On the contrary, myomectomy using the minimally invasive surgical techniques has the advantages of reduced post-operative pains, hospital stay and risk of pelvic adhesion.<sup>8</sup> However, in our environment, the abdominal route is favoured since most of the leiomyoma subjected to surgery are very large as a result of late presentation and equipment and skills for minimal access surgery are not readily available.<sup>9</sup> This review, which is the first in Amaku General Hospital, Awka, South-East Nigeria evaluates the clinical presentations, indications and morbidities associated with myomectomy.

## METHODOLOGY

This was a retrospective analysis of all myomectomies performed at the gynaecological unit of Amaku General Hospital, Awka (AGHA) Southeastern Nigeria over a six year period, 1<sup>st</sup> January, 2004 to 31<sup>st</sup> December, 2009.

AGHA is a 200-bed government owned secondary health facility located in the capital of Anambra State, South-East Nigeria. The town is inhabited by mainly ethnic Igbos with civil service and farming as the main occupations.

Patients with recurrent uterine fibroids after previous myomectomy were excluded. The hospital numbers of the sixty-two patients that had myomectomy were obtained from the gynaecological ward and theatre. Only fifty nine case notes were retrieved from the Medical Records Department and their ages, parity, clinical presentations, indications for surgery, intra- and post-operative complications were analyzed. The medical records were reviewed by trained staff using pre-established and piloted data extraction forms. The data was analyzed using basic descriptive statistics and presented in tables and simple percentages. The review was approved by the Ethical Committee of the hospital.

## RESULTS

There were 456 gynaecological admissions during the period under review and 62 had myomectomy accounting for 13.6% of all gynaecological admissions. Only 59 case notes were retrieved from the medical records department giving a retrieval rate of 95.2%. The age range of the patients was 18-46years with a mean of 23.5±2.1years. As shown in Table 1, majority 20(33.8%) of the patients were in the age range of 31-35 years. Three patients were aged 20years and below while 9 (15.3%) were above 41years. Forty-three (72%) patients were married, while the rest 16(28%) were single, divorced or widowed.

Also shown in table 1, nulliparous women (23) accounted for 40% of the cases while 9(15.3%) were grand-multiparous (five or more previous viable pregnancies). Lower abdominal discomfort 20(33.9%) was the commonest presenting complaint (Table 2). Menorrhagia occurred in 13(22.6%) patients while 7(11.9%) presented with infertility. In 3(5.1%) patients, uterine fibroids were discovered during the management of recurrent abortions. Twenty-seven (45.8%) patients presented with multiple symptoms. Clinical uterine size at presentation ranged from 12 weeks to 36 weeks with a mean of  $20.2 \pm 6.5$  weeks.

The main indications for myomectomy were lower abdominal discomfort 20(33.9%), menorrhagia 13(22%) and infertility 7 (11.9%). Fifty-six (94.9%) patients had abdominal myomectomy while 3(5.1%) had vaginal myomectomy.

Intra-operatively, uterine fibroids were observed in multiple sites in 33(55.9%) patients, intramural 11(18.6%), subserous 7(11.9%), submucous 5(8.4%) and 3(5.1%) were fibroid polyps. The sizes of the fibroid varied from tiny seedlings to larger ones measuring several centimeters in diameter. The uterine cavities were breached in 10 patients in the process of removing submucous fibroids. Foley's catheter size 20G was applied around the lower segment as tourniquet to reduce blood loss during surgery in all the cases that had abdominal myomectomy.

Pelvic adhesions were present in 26(44.1%) patients, whereas post-operative pyrexia 15(25.4%) was the most common post-operative morbidity (Table 3). The mean estimated blood loss was 700mls (range 400-1300mls). Eleven (18.6%) patients received homologous blood transfusion ranging from 2 to 4pints. The mean duration of stay in hospital postoperatively was 8.4 days (range 6-21days). Those with complications such as

wound sepsis and wound dehiscence 14(23.7%) spent more days in hospital. The mean operating time was 175minutes (range 115-350 minutes). No death was recorded.

**Table 1.** Age distribution

<u>Age (years)</u>	<u>N0.</u>	<u>%</u>
<20	3	5.1
21-25	8	13.6
26-30	12	20.3
31-35	20	33.8
36-40	7	11.9
41-45	5	8.5
>45	4	6.8
<b>Total</b>	<b>59</b>	<b>100</b>

  

<u>Parity</u>	<u>N</u>	<u>%</u>
0	23	40.0
1-4	27	44.7
≥5	9	15.3
<b>Total</b>	<b>59</b>	<b>100</b>

**Table 2.** Presenting complaints

<u>Presenting complaint</u>	<u>N0.</u>	<u>%</u>
Lower abdominal discomfort	20	33.9
Menorrhagia	13	22.0
Irregular vaginal bleeding	7	11.9
Infertility	7	11.9
Primary	2	3.4
Secondary	5	8.5
Lower abdominal swelling	6	10.2
Dysmenorrhoea	3	5.1
Recurrent abortion	3	5.1
Anaemia	3	5.1
<b>Total</b>	<b>59</b>	<b>100</b>

**Table 3.** Post-operative morbidity

<u>Post-operative morbidity</u>	<u>N0.</u>	<u>%</u>
Post-operative pyrexia	15	25.4
Wound Sepsis	12	20.3
Anaemia	8	13.6
Urinary tract infection	6	10.2
Prolonged postoperative pain	4	6.8
Wound dehiscence	2	3.4

## DISCUSSION

Myomectomy constituted 13.6% of all gynaecological admissions in this review. This is higher than 8.8% reported in Gombe, Northern Nigeria.<sup>10</sup> Majority of the patients in

this review had myomectomy because of their younger age, lower parity and the desire for further child bearing. As in other reports from South-East Nigeria, there is a trend towards delayed childbearing thus predisposing women to the problems of fibroid during their reproductive years.<sup>11</sup> However, in Kano, Northern Nigeria, a higher rate of hysterectomy 58.1%, was recorded among the patients who were younger and of higher parity because of early marriage and child bearing.<sup>12</sup>

Nine (15.3%) women above the age of 40 years had myomectomy compared with a similar study in Northern Nigeria<sup>12</sup> which reported only one case of myomectomy in the same group of women. However, in a review of myomectomy in women above 40 years, Obed, *et al* observed marginal improvement in fertility.<sup>13</sup>

Nulliparity is universally associated with uterine fibroid and it was observed in 40% of patients in this series.<sup>5</sup> However, uterine fibroid is not uncommon in the multiparous women of Negroid race<sup>5</sup> and 19.5% of grand-multiparous women had myomectomy in this study. Other researchers reported a preference for myomectomy by some women at higher parity due to their psychological attachment to menstrual function and cultural desire for larger family sizes.<sup>6</sup>

Lower abdominal discomfort (33.9%) was the commonest indication for myomectomy in this review. This agrees with other reports.<sup>6,14</sup> The unusually large sizes of the fibroids due to late presentation in our environment probably contributed to the clinical feature. Coincident pelvic inflammatory disease has also been suggested as a contributory factor to this clinical presentation.<sup>12</sup> Pelvic adhesion, a known result of chronic inflammatory disease was observed intra-operatively in 44.1% of the cases.

Menorrhagia contributed 22.6% of the indications for myomectomy as against 44.7% to 64.3% in other reports.<sup>14,15</sup> Menstrual abnormalities are often associated with submucous and fibroid polyps.<sup>14</sup> The submucous and fibroid polyps were recorded in only 8.4% of the patients hence they are unlikely to be the primary cause of the menstrual abnormalities observed in this series. The anatomic alterations caused by myomas and the consequent interference with uterine contractility may explain the occurrence of menorrhagia in the absence of submucosal fibroids.<sup>16</sup>

The relationship between infertility and fibroids is controversial and so is the place of myomectomy in the management of infertility.<sup>17</sup> Infertility was the indication for myomectomy in 11.9% of the patients in this series. In Gombe, Northern Nigeria, it was the most common indication for myomectomy.<sup>10</sup> The low incidence of patients presenting with infertility in this review may be attributed to the strong aversion for myomectomy due to the fear of surgery itself and the belief that infertility could result after myomectomy.<sup>18</sup> Additionally, other reports have shown the preference of infertile couples for herbalists and spiritual healers especially for their willingness to address the social and spiritual aspects of infertility.<sup>19</sup> It is probable that the high incidence of pelvic adhesions (44.1%) observed intra operatively compromised the fallopian tubes hence the predominance of secondary infertility in the present series.

In ten patients, the endometrial cavities were breached in the process of removing the submucous fibroids. Hysteroscopic myomectomy is now the standard minimally invasive surgical procedure for treating submucosal fibroids.<sup>9</sup> Compared with myomectomy through laparotomy, hysteroscopic myomectomy is not associated with pelvic adhesions and has a lower risk of uterine rupture during subsequent pregnancy and vaginal delivery as the resulting scar

does not involve the whole thickness of the uterine wall.<sup>20</sup>

Owing to increased vascularity of the myomatous uteri, abdominal myomectomy may involve significant blood loss.<sup>9</sup> The low blood transfusion rate, 13.6% and mean blood loss, 700mls in this review could be attributed to the mechanical occlusion of the uterine vessels blood flow using rubber tourniquet (Foley's catheter). Using this technique, Ikechebelu *et al* recorded a similar (756 mls) mean blood loss.<sup>21</sup> This technique has been found to be effective in minimizing blood loss without interfering with the surgical process.<sup>21</sup> A recent study showed that the tourniquet technique to occlude uterine blood supply is cheaper and more effective than the pre-operative gonadotrophic releasing hormone analogues.<sup>22</sup>

Post-operative pyrexia, 25.4% was the commonest post-operative morbidity. This was followed by wound sepsis, 20.3% and anaemia 13.6%. This is in line with other reports.<sup>10, 14</sup> Anaemia may be related to the preoperative menorrhagic menstrual pattern predisposing to mild anaemia and intraoperative blood loss.

The mean operating time was 175 minutes. This is comparable to 236 minutes reported by West *et al*.<sup>23</sup> The prolonged operating time could be attributed to the pelvic adhesions requiring careful dissection to avoid trauma to contiguous organs, multiple fibroids and the time required to close the deep enucleation sites. The mean duration of stay in hospital was 8.4 days. This is in consonance with reports from other centres<sup>25</sup>. No death was recorded in this review. This shows that myomectomy is a safe surgical treatment for uterine fibroids when reproductive function is to be preserved.<sup>26</sup> Majority (94.9%) of the myomectomy in this study were done through the abdominal route due to the large sizes of the fibroids. It is important to create awareness so as to encourage early presentation in order to reduce the morbidity

associated with the surgery. Periodic pelvic examination of women at risk may assist in early detection in order to reduce the morbidity.

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