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# Clinical, Surgical and Prognostic Aspects of Uterine Myomatosis at Pikine National Hospital in Dakar

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## Abstract

**Introduction:** Most common benign tumor in women of childbearing age with an incidence of 50% in black women, uterine leiomyoma in some cases benefits from surgical treatment. The aim of our work was to study the clinical, therapeutic and outcome aspects of uterine myomatosis surgery.

**Patients and methods:** We conducted a retrospective, descriptive, and analytical study whose inclusion criteria included all patients who had surgery for uterine myomatosis treatment at Pikine CHN over a period of five years from January 2010 to December 2014 (60 months).

**Results:** We collected 419 cases representing 37.3% of gynecological procedures. The average age of our patients was 39 years old. 36.3% of them were nulligest. Infertility was found in 44% of women. Uterine hemorrhages were the most common clinical manifestations with a rate of 45%. Infertility was found in 44% of women. The results of the surgical treatment had been satisfactory; in 82.7% of the patients there was a disappearance of the symptomatology. Some complications and six cases of recurrence at one year were found. Fertility after myomectomy in patients who wanted to become pregnant was influenced only by the existence of a history of infertility and the duration of infertility.

**Conclusion:** Uterine fibromyoma is the most common benign tumor in women of childbearing age and can negatively affect the fertility of these women. The management depends on the clinical picture and the period of female genital activity. Short, medium and long post-therapeutic monitoring is the rule.

**Keywords:** Fibroids; Uterine myomatosis; Myomectomy; Hysterectomy; Fibroid surgery; Pikine hospital; Fertility

## Introduction and History

The uterine fibroid, the most common benign tumor in women during periods of genital activity, benefits in some cases from surgical management. Despite its high incidence (50%) in black women, few studies in Africa have focused on the fate of those who had surgery for this uterine myomatosis. We then conducted a study that aimed to determine the frequency of women with uterine myomatosis operated at Pikine National Hospital center, to report the clinical manifestations of uterine myomatosis, to study the effectiveness of surgery on the gynecological symptomatology and assess fertility after myomectomy in women wanting pregnancy.

## Patients and Methods

This was a retrospective, descriptive, and analytical study that included all patients who had undergone surgery for the treatment of uterine myomatosis at Pikine National Hospital Center over a five-year period from January 2010 to December 2014. We did not select cases of uterine myomatosis associated with pregnancy. All patients included were consenting. The data was analyzed by the Sphinx software version five. The graphs were done by the Excel 2016 version software. The correlation examination and the significant risks that existed between the variables during the analysis were performed using adequacy and comparison tests. The Chi-square test was used for comparisons. The tests were significant as soon as the associated probability was less than 5%. We used the null hypothesis if α was less than 0.05. If the null hypothesis was rejected, we proceeded to the analysis of the relation. Otherwise, the relationship was simply removed from the study [1].

## Results

### Frequency

Uterine myomatosis interventions accounted for 37.3% of all gynecological procedures performed at the Pikine National Hospital Center.

### Characteristics of the patients

The average age of our patients was 39 years with extremes of 20 years and 68 years. Uterine fibroid were exceptional before age 25 (0.7%); rare before 30 years (8.6%); and the majority of cases were found in the age group [30-39 years] with a rate of 40.6% of patients. The nulligests accounted for 32.64% of the population, the nulliparas 36.32%. One in ten women was multiparous. Infertility was found in 44% of women. For 38.3% of women, infertility duration was less than 5 years and 24.4% had infertility of more than 10 years.

### Signs

Uterine hemorrhages were the most common clinical manifestations with a 45% rate; followed by the presence of an abdominal-pelvic mass with a percentage of 44.7% and pelvic pain in 40.5% of women. The other functional signs with a rate of 4.5% were of the type of menstrual cycle disorder (spaniomenorrhea), dyspareunia, urinary tract signs and genital infections. In 2% of the population uterine myomatosis was asymptomatic.

## Therapeutic Aspects

### Type of surgical intervention-Operative data

Myomectomy was performed in 68.5% of patients; 30.8% had a total hysterectomy and 0.7% had a subtotal hysterectomy. A case of severe haemorrhage during myomectomy has been reported requiring hysterectomy. The short-term postoperative complications found were two cases of infection of the operative wound, one case of thrombophlebitis of the left lower limb and one case of evisceration. The long-term postoperative complications found were two cases of acute intestinal obstruction, two cases of incisional hernia, two cases of keloid healing and one case of uterine synechiae.

### Results of the treatment

**Persistence of symptomatology :** Six cases of myoma recurrence at 1 year were found and one patient had a recurrence of myoma at 6 months. Thirty-three patients (17.3%) complained of persistent symptomatology, mainly pelvic pain in 22 patients; 3 women were still complaining of menometrorrhagia and 3 had an abdominopelvic mass. Other signs complained of by these women were surgical scar pain, dyspareunia or dysmenorrhea.

**Fertility after myomectomy:** Within 18 months, 24.7% of women had a pregnancy. 67% of pregnancies have progressed to term birth; 8% of pregnancies were in progress and 6 cases of abortion (25%) had been reported. In our cohort there was no statistically significant relationship between age and fertility after myomectomy. Parity did not influence fertility after myomectomy. Patients who had a history of infertility were less likely to have a pregnancy after myomectomy (p=0.004). Infertility greater than five years negatively affected pregnancy after myomectomy. (p=0.004).

## Discussion

### Fréquency

La fréquence des interventions chirurgical pour le traitement d'une myomatose utérine représentait 37.3% de l'ensemble des interventions gynécologiques réalisées au CHN de Pikine. Ce résultat est nettement supérieur à celui rencontré dans l'étude de Wathie (7.9%) réalisée au centre de santé Roi Baudoin [2]. Ce qui peut s'expliquer par le plateau technique assez relevé, un personnel qualifié et une accessibilité pour la population environnante.

The frequency of surgical procedures for the treatment of uterine myomatosis accounted for 37.3% of all gynecological procedures performed at the Pikine National Hospital center. This result is significantly higher than that found in the Wathie study (7.9%) conducted at the Roi Baudoin hospital [2]. This can be explained by the relatively high technical plateau, qualified personnel and accessibility for the surrounding population.

### The age

The majority of our patients were between the ages of 30 and 39, representing 40.6% of the population. Wathie and Sene, with their cohort also on black populations, also found a larger number of women between 30 and 39 years of age [3]. Other studies such as Lumbiganon and Parazzini with white women found that more than 60% of their patients were between 40 and 49 years of age [4,5]. Elouardichi in his study in Morocco where the white race was more represented had found a similar result to those latter [4]. This confirms that black women develop uterine myomatosis at a younger age compared to white women [6,7].

### Gestity and parity

The nulligestes were the majority, 32.64% in our cohort; 53.4% in the Elouardichi study [4]. Nulliparous women accounted for 36.32% of patients The predominance of nulligests and nulliparas confirms the role of the estrogen in the genesis of uterine fibroids through exposure to prolonged hyperestrogeny. Our results confirm the hypothesis of Lumbiganon [7] who argues that the risk reduction of uterine fibroids is linked to parity and that this risk decreases with the number of pregnancies [8-12].

## History of Infertility

The infertility rate due to uterine fibroid could then be 40.2%. However, the complete infertility report was not asked of all infertile patients and their husbands. This result is not formal, especially since the few studies done on this subject show only a level of 1 to 2% infertility that may be due to uterine fibroid [13-15].

## Signs

The most common clinical manifestations were uterine hemorrhages, abdominopelvic mass, and pelvic pain. Uterine


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hemorrhages were found in 45% of cases. Wathie found a rate of 56.1% for uterine haemorrhage and only 4.7% of her patients had an abdominopelvic mass [2]. Magassouba and Elouardichi also found larger proportions of women who had uterine haemorrhage [9]. Many authors also claim that uterine hemorrhage is the most common symptom in case of fibroid [8,16]. These bleeds caused by fibroids are thought to be due to disruption of normal endometrial development, increased endometrial surface area, and disruption of myometrial contractility. In addition, the high rate of women with an abdominopelvic mass (44.7%) could be explained by a delay in patient management. Indeed we are in a society that has its own realities; in which the patients prefer to go see the traditional healers before being finally consulted by a doctor. The pelvic pain with a rate of 44.9% was either associated with the presence of an abdominopelvic mass or accompanied uterine hemorrhages. They were isolated in 15.6% of cases. Anemia found in 21.8% of patients was due to uterine hemorrhages. A rate of 13.8% of patients complained of dysmenorrhea. These dysmenorrhea are usually related to a cervical or isthmus fibroma that impedes menstrual flow [14]. The compressive disorders due to the increased volume of the abdomen were constipation (3%) and pollakiuria was found in a single patient. Wathie in her study found constipation in only 2.1% of patients [2]. Uterine fibroids was asymptomatic in 2% of the population. In these patients only infertility was the reason for consultation in 23.7% of women.

## Results of Treatment

### Persistence or disappearance of symptoms

82.7% of the patients had a disappearance of the symptomatology. Thirty-three patients (17.3%) complained of persistent symptomatology, mainly pelvic pain in 22 patients; 3 women were still complaining of menometrorrhagia and 3 women had an abdominopelvic mass. Other signs complained of by these women were pain in the surgical scar, dyspareunia, or dysmenorrhea. In the literature, approximately 10% of women undergoing myomectomy surgery are reoperated within 10 years of symptom recurrence. Symptoms can only be partially treated, with persistent bleeding, pain, or infertility (risk about 20%)

### Fertilité after myomectomy

During our study period, 97 women had a desire for pregnancy. Over a period of 18 months, 24.7% had a pregnancy. Sixty six percent of these pregnancies progressed favorably to a term delivery and 8.3% and two pregnancies were ongoing. We had 6 cases of abortion, or 25%. Our results are similar to those of Sene who had found a pregnancy rate after myomectomy of 25% with 68. Four percent evolution to a term delivery [1]. Roux found a pregnancy rate after myomectomy of 13% and a rate of 6% of miscarriages. Note that their study population consisted of only 15 patients; the results they obtained must therefore be interpreted with caution because of the limited size of their sample. The impact of myomas on fertility can be evaluated by comparing women with myoma to women free from any fibromatous pathology consulting for a desire for pregnancy, or by comparing the results of myomectomy with respect to abstention in patients with a desire for pregnancy. A single prospective study comparing a population of 106 infertile women with myomas to a population of 106 infertile women without myoma found a significantly decreased conception rate in the presence of myomas (11% versus 25%, p = 0.02). The size, number and location of myomas have not been specified in this study, but it does demonstrate the responsibility of myomas for fertility in case of spontaneous procreation [17]. Elsewhere pregnancy rates of 50 to more than 60% have been reported after myomectomy in patients with unexplained labeled infertility. A retrospective study shows that myomectomy increases the chances of pregnancy after surgery (from 28% to 70%) and reduces the risk of miscarriage (from 69% to 25%) tending to prove a beneficial effect of the excision of interstitial and subserous myomas on obtaining and terminating pregnancies. In all cases, it is important to have detected and corrected possible infertility factors before the procedure [14].

## Factors Influencing Fertility After Myomectomy

Fertility after myomectomy in patients wishing to become pregnant was influenced only by the existence of a history of infertility (p=0002) and by the duration of this infertility (p=0.004). In patients who had a history of infertility the pregnancy rate after myomectomy was only 14.9% and 72.7% of those infertile women who had a pregnancy had infertility less than 5 years. In addition to the existence of a history of infertility, there were other factors that could have a negative impact on fertility after myomectomy, namely age and parity [1]. In the literature it is established that age greater than 35 years, infertility duration greater than two years, association with other infertility factors (tubal, ovarian, or spermatic factors), and localization. Posterior of the myoma (s) decreased pregnancy rates after myomectomy [13]. In our work, infertility found as the only factor that negatively influences fertility after myomectomy leads us to ask the question about the relevance of conservative surgical treatment (myomectomy) to remedy infertility. This surgical treatment has been associated with both pelvic and intra-uterine adhesions, and any potential benefit from UF withdrawal may be offset by the adverse effects of surgery on uterine integrity. In addition, the consequences on pregnancy outcomes are not negligible. It is therefore imperative that surgical uptake of UF to correct infertility be implemented only when there is evidence that the use of such an intervention will lead to improved pregnancy outcomes [12]. It is therefore imperative in front of infertility in a woman with uterine myomatosis to make a complete assessment of infertility of the couple before proposing a conservative surgical treatment to improve the fertility.

## Conclusion

At the end of our study we can say that our results are diagnostically and therapeutically satisfactory and the patients


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had a good follow-up after the surgery for uterine fibroid. Recall that uterine fibroid is the most common benign tumor in women of childbearing age and can negatively affect the fertility of these women.

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