



Review Article

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Interest of Cervical Withers in Reducing Blood loss during Myomectomy at the Military Hospital of Ouakam (Senegal)



MM Niang*, B Diop, CT Diarra, O Gassama, M Thiam and CT Cisse

Department of Gynecology and Obstetrics, Institute of Social Hygiene, Sénégal

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*Corresponding author: Mouhamadou Mansour Niang, Assistant Professor, Cheikh Anta Diop University of Dakar, Sénégal,
Email: mansniang@hotmail.com

Abstract

Objective: Evaluate the impact of cervical withers in reducing blood loss during myomectomy.

Methods: That was a prospective and comparative study of case-control relevant to myomectomy performed at Ouakam Military Hospital between 1 May 2013 and 31 August 2014. Cases were made by myomectomy after placing a withers to the cervical region and controls was made without withers. For each patient we evaluated the hemoglobin on the day of the surgery and 48 hours later to assess blood loss. The analyzes were done using SPSS version 13.0 software and the Fisher test was used to compare the two groups.

Results: During the study period, we achieved 126 myomectomy including 63 after cervical withers. The analysis showed that the variation in hemoglobin was significantly lower in the case (0.7g/dL) compared to control (2.6g/dL) ($p=0.0001$). There was no statistically significant difference between the two groups in the duration of surgery (108.7min vs 106.6min) ($p = 0.860$), the number of removed fibroids (11 versus 10.7) ($p = 0.893$), the fibroids weight (622g versus 597g) ($p = 0.420$). After surgery there was no complication among the cases.

Conclusion: The clamping of the cervical region significantly reduces blood loss during myomectomy. This technique is associated with rare intraoperative and postoperative complications.

Keywords: Myomectomy ; Cervical withers; Hemorrhage - fibroma

Introduction

Myomectomy is associated with a high risk of bleeding. In Senegal and in most developing countries, where the means of prevention as arterial embolization does not exist, this procedure is associated with significant morbidity. To overcome this, we experimented cervical-isthmus withers and appreciated its impact on the reduction of blood loss during myomectomy to the Military Hospital of Ouakam (Senegal).

Patients and Methods

It was a prospective and comparative case-control study conducted over a period of 15 months from May 1st 2013 to August 31st 2014 at Ouakam Military Hospital. The cases consisted of patients who under went myomectomy by laparotomy after insertion of the cervical withers which is made by a Foley probe or a sterile glove placed at the level of the uterine isthmus and taking the uterine arteries (Figure 1). It was left in place for the duration of the surgery.

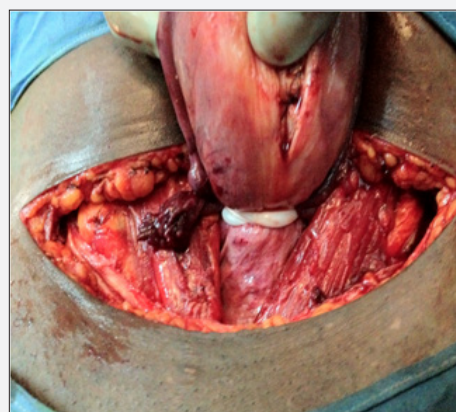


Figure 1: Cervical withers placed on the uterine isthmus.

Each case was matched to a control consisting of myomectomy by laparotomy performed just after without cervical withers.

Blood loss was estimated by evaluating hemoglobin rates on the day of surgery and 48 hours later. The parameters studied were: age, parity, reasons for consultation, indications of myomectomy, number of fibroids, weight of fibroids, duration of the intervention, length of hospital stay and blood loss. The data was analyzed using SPSS software version 13.0 and the Fischer test was used to compare the two groups with a significance level of 0.05.

Results

Patients characteristics

The patients were between 24 and 47 years old, with an average of 38 years. Fifty-eight of them (46%) were over 40 years old. Parity ranged from 0 to 7, with an average of 1. Ninety-four patients were nulliparous (74.6%). They were married in 96% of cases.

Reasons for consultation

They were dominated by cycle disorders such as menorrhagia, menometrorrhagia and infertility in 72%, 21% and 54% of cases, respectively.

Indications of myomectomy

A patient could have several indications but only the main indication was retained. They are summarized in Table 1.

Table 1: Distribution by indications (N = 126).

Indications	Number	Frequency (%)
Infertility	47	37.3
Disorders of the menstrual cycle	58	46
Pelvic pain	13	10,3
Abdominal-pelvic mass with compression signs	8	6,3
Total	126	100

Surgical characteristics

The mean number of fibroids, the mean fibroid weight, the duration of surgery and the hospital stay are summarized in Table 2. For these different parameters, the two groups were comparable, there was no statistically significant difference.

Table 2: Surgical characteristics.

Surgical Characteristics	Group "withers" (N=63)	Control (N=63)	P
Mean fibroids number	11(1-80)	10.7 (1-41)	NS
Mean fibroids weight (g)	622(100-3900)	500(80-2600)	NS
Mean duration of the surgery	109min (45-320)	106min (45-210)	NS
Mean duration of hospital stay	3 days	3days	

Evaluation of blood loss

On the day of the surgery, the mean hemoglobin rates were comparable in the two groups: 12g/dl for the "withers" group against 12.5g/dl for the controls.

Blood loss was greater in the control group with a statistically significant difference (p = 0, 0001) (Table 3).

Table 3: Variation of hemoglobin rate.

Variation of Hb Rate	Group "withers" (N=63)	Control (N=63)	P
Hb rate (g/dL) at day 0	12 (8,9-14,5)	12.5 (8,9-15,8)	0.1
Hb rate (g/dL) at day 2	11.4 (6,2-13,7)	10.1 (7,2-13,2)	0.002
Variation of Hb rate (g/dL)	0.6	2,4	0.0001

Hb: Hemoglobin ; day 0: Day of the surgery; day 2: 48 hours after the surgery

Discussion

Characteristics of the patients

Our patients were between 25 and 36 years old, with an average of 37 years. This age is comparable to the average age of occurrence of fibroids found in the Wathie series [1]. The average age of fibroid onset, its rate of growth over time, and its single or multiple character remain controversial [2,3]. Parity ranged from 0 to 5, with an average of 1. Nulliparous and primiparous women accounted for 80% of our sample. Lumbiganon [4] found that with more than 5 deliveries, the risk decreases with OR = 0.21 (95%, CI = 0.12-0.35). According to Parazzini [5], the late age of the last pregnancy decreases the risk with OR = 0.5 (0.3-0.8). Thus, pregnancy is a protective factor, as is the high number of gestation [6]. The predominance of 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 [4] who argues that the risk reduction of uterine fibroids is linked to parity and that this risk decreases with the number of pregnancies.

Reduction of blood loss

Myoma's surgery is very hemorrhagic, especially myomectomy. The first intervention to reduce blood loss and intraoperative complications is the correction of preoperative anemia. In our study, mean hemoglobin rates on the day of surgery were 12g/dl for the "withers" group and 12.5g/dl for controls.

The correction of preoperative anemia requires a martial supplementation or IV iron cure.

Several studies have shown that the administration of LHRH analogues for 3 months preoperatively assists in the correction of anemia by decreasing bleeding, and decreases the size of fibroids [7]. Reducing fibroid volume may help to avoid laparotomy by

simplifying vaginal or laparoscopic procedures. LHRH analogues are also associated with decreased operative time, blood loss, postoperative pain and length of hospital stay [8-10]. Some authors, however, report a change in the consistency of fibroids, making the dissection plan more difficult.

Regardless of the approach, preoperative embolization with resorbable particles (48 hours to 3 hours before surgery) reduces blood loss and facilitates uterine suture [11]. It finds its place for patients who have no desire for pregnancy and have a high risk of bleeding; multiple myomectomy, fibroma >5cm, transfusion difficulties, haemostasis disorder.

In our developing countries, there is a low socio-economic standard of living for patients making it difficult for them to access LHRH analogues and a limited technical platform in our hospitals. Indeed, in Senegal, arterial embolization is not available in any public hospital. Also, patients consulting late for lack of funds and this delay in the consultation explains that it is most often carried out polyanemectomies.

Thus, in our developing countries, an alternative to the above-mentioned measures for the reduction of blood loss during myomectomy would be the establishment of a cervical withers before the surgery.

This technique would have several advantages:

- Its low cost compares with those of LHRH analogues and arterial embolization. Indeed, it requires only a Foley probe or a sterile glove in addition to the classical myomectomy equipment;
- The bloodlessness of the procedure that allows the surgeon to make good uterine sutures to avoid postoperative hemorrhages and uterine rupture;
- The preservation of fertility, indeed, this technique could reduce the number of hemostasis hysterectomy for uncontrolled intraoperative bleeding. In our series we did not perform any hemostasis hysterectomy;
- The reduction of pre and postoperative blood loss as evidenced by our results with an average decrease of hemoglobin of 0.6g/dl in the "withers" group against 2.4g/dl for controls.



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Conclusion

In our developing countries where arterial embolization is not available and LHRH analogues are not always available to patients, use of the cervical withers is an effective alternative for reducing blood loss during myomectomy.

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