OPEN ACCESS
Scholars International Journal of Obstetrics and Gynecology
Abbreviated Key Title: Sch Int J Obstet Gynec
ISSN 2616-8235 (Print) |ISSN 2617-3492 (Online)
Scholars Middle East Publishers, Dubai, United Arab Emirates
Journal homepage: https://scholarsmepub.com/sijog/

Original Research Article

Fibroma and Pregnancy: A Retrospective Study of 18 Cases-Experience Gynecology Obstetric department Chu Hassan Ii Fes Morocco

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DOI:10.21276/sijog.2019.2.7.8 | **Received:** 19.07.2019 | **Accepted:** 27.07.2019 | **Published:** 30.07.2019

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Abstract

Our study is based on a retrospective analysis of 18 cases of fibroma and pregnancy association in the maternity of CHU HASSAN II Fez MOROCCO over a period from 2014 to 2018 and whose purpose is to study maternal and fetal morbidity during fibroid association and pregnancy and to remind the therapeutic attitude vis-à-vis fibroids during pregnancy. The frequency of this association is 0.37%. It occurs mainly in women older than 30 years. Primiparous most often. In 61, 11% the diagnosis of fibroma was made for the first time during the pregnancy. Aseptic necrobiosis relatively frequent, accounting for 22.22% of all complications, it has evolved well under medical treatment. Although dystocic presentations, premature rupture of membranes, miscarriages and threats of premature delivery are frequently encountered, pregnancy is in most cases around the term. The delivery took place in 47.05% by Caesarean. The maternal and fetal prognosis is excellent. Treatment remains based on abstinence and regular clinical and ultrasound monitoring. Myomectomy during pregnancy is to be reserved for the torsion of pedicled fibroma and necrobiosis resistant to medical treatment. The association fibroid and pregnancy is not rare, the complications are frequent hence its membership in the lot of high-risk pregnancies. Early detection of complications and prevention of delivery hemorrhage would reduce maternal and fetal morbidity.

Keys words: Fibroid, pregnancy, complication, prevention.

INTRODUCTION

Uterine fibroid is the most common benign tumor in women of childbearing age. Its association with pregnancy ranges from 0.5 to 4% and makes it a high-risk pregnancy [1]. Indeed, the fibroid can hinder the course of pregnancy, labor, delivery and even the postpartum. It may itself undergo structural changes and complications following hormonal variations and anatomical changes that occur [2]. It is understandable that the discovery of myomas in a pregnant woman can raise concerns and questions about the success of her pregnancy and the care to adopt. The purpose of this study was to answer the following questions regarding the association of fibroma and pregnancy: • What types of fibroids are most complicating? • What are the most common complications in these parturients? • Is the fetal prognosis changed during this association? • Deduce a therapeutic behavior and specify the place of fibroid surgery during pregnancy?

PATIENTS AND METHODS

This is a descriptive retrospective study of 18 cases collected at the obstetrics and gynecology department of the CHU HASSAN II of Fez-MOROCCO over a period from January 2014 to December 2018. Inclusion criteria: Patient followed in prenatal to our external consultation: minimum 3 consultations. Patients followed in other health facilities and who have been admitted for a complication of their fibroma. Exclusion criteria: fibroids less than 3 cm in size and fibroids found at a postpartum distance (> 30 days).

RESULTS

18 cases of fibroma association and pregnancy were recorded in 4800 deliveries corresponding to an incidence of 0.37%. The average age of our patients is 32.4 years with extremes ranging from 21 to 40 years? The majority of patients, 66.7%, were aged between 31 and 40 years old. 50% of the patients were primigestes and 50% of the multigestes. The majority of our patients were nulliparous, or 61.11% of cases. Among the history of parturients are spontaneous miscarriages with a percentage of 16.66% (Table 1). The majority of uterine fibroids (63.63%) are discovered in the first trimester, 54.54% of which are incidental findings (Tables 2 and 3). In our series 76.19% fibroids were located in the uterine body while 23.8% had a cervico-isthmic seat. The interstitial, sub serous and submucosal types were found in 52.38%, 38.09% and 9.5% of the cases respectively. The size of fibroids is detailed in (Figure 1). During pregnancy, obstetric complications were dominated by the threat of premature delivery with a percentage of 23.52% followed by premature rupture of membranes 17.64% (Figure 2).

The most common complication of myomas during pregnancy was aseptic necrobiosis in 4 patients, a percentage of 22.22%; This complication occurred for myomas whose size is greater than 5 cm and whose clinical picture was limited to intense pelvic pain type of torsion evolving by thrust with a fever; The evolution was generally favorable after rest, and antispasmodic and analgesic treatment. The evolution of pregnancy: 2 patients gave birth vaginally, one to 38 SA and the other to 39SA; the third patient delivered by cesarean to 38SA as a pre-employment barrier; the fourth patient presented a spontaneous miscarriage at the age of 11SA. No torsion cases were revealed in this study. A case of rectal compression manifested itself by chronic constipation at the age of 28SA, the fibroid was subserotic sessile serous of 16cm in size (Table 4).

Delivery was high in 8 patients, 47.05%. Caesarean section was indicated for purely obstetrical reasons in 4 patients, ie 50% and for reasons directly related to the fibroma in 4 patients or 50% whose indications are (Obstacle previa in 2 patients at the age of 38, the fibroma in the two cases were interstitial with anterior isthmic seat measuring respectively 14 cm and 8 cm Dynamic dystocia with preoperative myomectomy in a single patient at the age of 37SA + 6j, the fibroid was fundic sub serosa measuring 11 cm. working at 38SA, the fibroid was interstitial anterolateral left doing 8cm). 9 patients, 52, 94% delivered vaginally without any incident. The delivery proceeded without any hemorrhagic incident except for a single patient who presented a hemorrhage of the delivery during the cesarean section is 5.8%. The uterus in this patient was polymyomatous and the course was favorable with cessation of bleeding under medical treatment alone (oxytocic and prostaglandin). Maternal mortality was zero. The postpartum proceeded without any incident in all the patients. In addition, two patients presented aseptic necrobiosis in the year following delivery who had undergone myomectomy, and histopathological examination revealed aseptic necrobiosis with no signs of malignancy. The birth weight was between 2500 and 4400 g with an average weight of 3014g. The majority of newborns, 94.44%, did not present a pain at birth with an Apgar greater than or equal to 7. No cases of perinatal mortality.

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DISCUSSION

The frequency of the association of fibroma and pregnancy varies from 0.1 to 3.87% according to the authors. In fact this association must be underestimated because the reported cases are essentially those of symptomatic fibroids [1]. It was found in the various published series that this association is more frequent among women over 30 years of age (Table 5) [1-2]. In our study 66.7% of our patients are over 30 years old with an average age of 32.4 years.

Among recent advances, ultrasound has made it possible to objectify fibroids and to specify their prevalence [2]. In our serie 22, 22% of fibroids were known before pregnancy, 61.11% of fibroids were discovered during pregnancy through ultrasound. As a matter of fact, asymptomatic fibromyomas, discovered

by routine ultrasound, may partly contribute to the increase in the frequency of fibroids associated with pregnancy.

Fibroma and pregnancy are more likely to be nulliparous [3]. In our study the nulliparous constitutes 61,11%, this figure joins the one found by VERGANI [4]. (70% of nulliparous people) It seems that the pregnancy has a protective effect on the development of uterine fibroid, this has been demonstrated in the study of CHERLY AND KIMBERLY and the work of CORONADO who observed that multiparous develops less uterine fibroid [4, 5].

Referring to the literature, we note that the evolution of fibroid size during pregnancy is controversial [6]. Indeed, this classic notion of increasing the size of the fibroid during pregnancy seems to be challenged by current ultrasound studies that have shown that many myomas do not change in size or decrease in size during pregnancy (Table 6) [5-7]. In our series, of the 14 patients who were known to have uterine fibroids before or during pregnancy and who had reached term, 35.71% of fibroids increased in size during the third trimester and 50% of fibroids did not develop and not changed in size, while 14.28% of fibroids decreased in size between the second and third trimesters, this corresponds to the figures found in the literature.

The course of pregnancy is generally quite simple, but fibroids can have consequences on all stages of fetal development [8, 9]. It is suggested that the presence of fibroma during pregnancy is associated with antenatal complications in 10 to 40% of cases [10]. In a large retrospective cohort of more than 12,000 women, it was estimated that one in 500 pregnancies had a complication secondary to a myomatous uterus and that 10% of women with a myomatous uterus had an obstetric complication [11]. Unfortunately, there were no comparisons between complication rates in women carriers and women free of myomatous disease [11,12]. The frequency of spontaneous abortions varies in the literature by 13% and 25.3% [9]. All authors suggest that uterine fibroids increase the risk of spontaneous abortion, however this risk is not equal for all fibroids, and large submucosal fibroids that distort the uterine cavity have been uniformly related to spontaneous abortions [10, 11]. In our series, we found a percentage of abortions of 5.5%, the fibroma in this patient was submucosal isthmic 8 cm. This low frequency can be explained by the fact that 80% of the fibroids had a mean size (<10cm) and only 9.5% were submucosal. The localization of the myoma must be taken into consideration; thus submucosal myomas can cause mechanical, vascular endometrial alterations and induce alterations of the stroma such as atrophy or ulceration reducing the chances of placental development [13].

In their case-control study, Aydeniz et al show that submucosal fibroids with respect to placental insertion increase the risk of intrauterine growth retardation (IUGR) (14% versus 6.6%) and retro hematoma placental (HRP) (3.2% versus 1.3%) [13, 14]. In our study we found a single case of IUGR or 5.5% with a birth weight of 2500g at 38 WA, the fibroma in the mother was submucosal which confirms the hypothesis of Aydeniz *et al*. The intra uterine growth retardation (IUGR) explained by Rosati *et al*. In large fibroids by diversion of blood flow is not found in the literature [13]. Fibroids can compress the ovular cavity, hinder distensibility of the myometrium, and be responsible for compression syndrome and fetal deformity [12]. They can interfere with the regulation of the amount of amniotic fluid [12]. But there may be a detection bias; indeed, these women with myomatous uterus undergo much more ultrasound examinations than the general population [12]. It is certainly not necessary to increase the frequency of ultrasounds in women with myomatous uterus without follow-up for IUGR (placenta inserted opposite the fibroid) [12, 13]. Lolis *et al*. recommend ultrasound surveillance of myomas; which seems to us to be a useless and stressful attitude [14].

The percentage of threatened preterm labor ranges from 7.6% for DELABARRE [15] to 30% for DORRA *et al*. with preterm delivery in 1.26% to 33% of cases (Table 7) [14]. Rice *et al*. observe an increased threat of preterm birth and premature delivery in women with fibroids greater than 3 cm in diameter, this increase is 20 to 28% for those over 5 cm. There is no increase in the rate of preterm delivery for myomas smaller than 3 cm [14, 15].

Fibroids may be responsible for dystocic presentations: seat presentation, transverse, oblique, or primary deflected cephalic presentation [16]. The frequency of irregular presentations varies according to the authors; the study of Coronado found a relative risk of 4 of seat presentation [16, 17]. In a control case study SENTILHES et al found 4% in the control population and 11% in the fibroid patient population, while in its series, DELABARRE found 20.5% of podalic presentation [16, 17]. Thus, there is a significant increase in dystocic presentations here, especially with regard to the seats, which is explained by a lack of accommodation in the presentation and amplification of the lower segment hampered by a fibroma previa, isthmic or bulky deforming the uterine cavity [16-18]. In our study, the two cases of seat presentation were associated with interstitial myomas, which correspond to the data of the literature.

Regarding the complications of fibroma during pregnancy, there is no evidence of the harmful effect of pregnancy on the occurrence of necrobiosis because no comparative study has been performed [12]. No preventive treatment has been validated [12, 13]. The

diagnosis is based on clinical signs associating: localized pain, hyperthermia lower than 38.5 ° C and a good efficacy of medical treatment based on analgesics and non-steroidal anti-inflammatory drugs [NSAIDs]. It is more common in the 2nd trimester of pregnancy. The percentage observed in the aseptic necrobiosis literature is variable [19]. Hemorrhages in delivery affected 7.3% of the population of women whose uterus was myomatous compared to 1.8% for the control population of the Lopes *et al*. Series [17-19]. The haemorrhage rate of delivery was 5.8% in our series; occurred in a patient with a polymyomatous uterus with a type 2 fundus fibroma measuring 10 / 8cm and the other isthmic type4 measuring 8 / 4cm discovered during cesarean section indicated for unfavorable bishop. The evolution was marked by the cessation of the bleeding under oxytocin infusion alone but the patients must always be informed of the risks of hemostasis hysterectomy.

Before pregnancy, the action to be taken is based on the results of the assessment. Abstention is justified for small asymmetric intramural or subserosal fibroids (less than 3 cm). A myomectomy in a young woman may be indicated before pregnancy in some cases. The indication should be used with caution because the morbidity of a laparotomy myomectomy is not negligible and postoperative adhesions alone can be a source of sterility [20].

During pregnancy, the majority of fibroids remain asymptomatic and only careful monitoring is required. In case of pain, aseptic necrobiosis should be systematically mentioned. Ultrasound seeks a modification of the echostructure. The operative indications must remain exceptional, reserved for the necrobiosis pedicled benign fibroids resistant to medical treatment. This medical treatment is based on rest, analgesics or even non-steroidal anti-inflammatory drugs (with monitoring of fetal diuresis) or better with corticosteroids. The delivery route is decided according to obstetric conditions, but nothing should lead to cesarean section if the presentation is cephalic and the fibroma non praevia [21, 22]. In our series no myomectomy during pregnancy was performed, the three cases of necrobiosis identified have evolved well under medical treatment and the fourth case was complicated by an spontaneous miscarriage to 11SA.

In the course of cesarean section it is only necessary to perform myomectomies of necessity, when the fibroma sits on the lower segment or in the subserosal position or if it entails a risk of torsion. The patient should always be informed of the possibility of hysterectomy in case of bleeding with poor uterine retraction or when the number and size of fibroids expose the woman to serious postpartum complications [21-23].

After childbirth the risk of haemorrhage from delivery and postpartum is correlated with the size of fibroids. Incitement to breastfeeding and the prescription of uterotonics must be strong to improve uterine contractility and haemostatic retraction [23, 24]. The occurrence of pain and mild fever suggests aseptic necrobiosis. In case of severe or prolonged fever, septic necrobiosis is to be feared and must evoke the possibility of radical surgery. Prevention of thromboembolic risks is recommended [25].

CONCLUSION

The association of fibroma and pregnancy is not uncommon; the mutual risks of this association are generally low, which reassures the patients. Pregnancy follow-up should be cautious, based primarily on the clinic and ultrasound, with management by a team that can cope with the various complications. The few scientific studies, which moreover concern a small number of people, make it difficult to standardize an unequivocal therapeutic behavior.

Table-1: Distribution according to antecedents Obstetric

Antecedents	Miscarriage	Caesarean	Premature delivery
Number of women	3	2	1
Percentage	16,66	11,11	5,5

Table-2 : Distribution according diagnostic circumstances

Diagnostic circumstances	Before pregnancy	During pregnancy	During childbirth
Number of women	4	11	3
Pourcentage(%)	22 ,22	61,11	16,66

Table-3: Distribution according gestationnel age and discovery mode

Discovery mode	Fortuitous discovery					Pelvic pain			
Gestationnel age of discovery	T1			T2	T3	T1		T2	T3
	<8SA	>8SA	Total			<8SA	>8SA		
Number of cases	2	3	5	1	0	2	0	2	1
Percentage (%)	18,18	27,27	45,45	9,09	0	18,18	0	18,18	9,09

Table-4: Summary table of complications of fibroids during pregnancy

Complication	Number of cases	AG(SA)	Percentage
Necrosis aseptic	4	8-21	22,22
Rectal compression	1	28	5,5
Torsion	0	0	0

Table-5: Age and association of fibroma and pregnancy

AUTHORS	Number of cases of myomas	Over than 30 years	Average age
BANO et al(2017)	163	89	33
ATEF(2005)	19	65,2	33
Ahmed(2006)	107	-	31
DORRA et al(2012)	80	60	32
VERGANI(2007)	251	-	34
DELABARRE(2011)	79	81	33
Our serie	18	66,7	32

Table-6: Evolution of the size of fibroids during pregnancy (ultrasonographic studies)

Authors	Number of cases of myomas	No modifications %	Increase	Decrease
ATEF	19	15,78	84,2	0
AHMED	107	17,9	17,8	64,3
VERGANI	251	-	30	-
Our serie	15	50	35,71	14,28

Table-7: Frequency of threat of premature delivery and premature delivery

Authors	Premature delivery %	Threat premature delivery %
VERGANI	7,6	-
RAJA	-	10
DELABARRE	1,26	7,6
LEE	-	16,1
ATEF	33	26
BANO et al	-	15,3
DORRA et al	8,75	30
Our serie	0	23,52

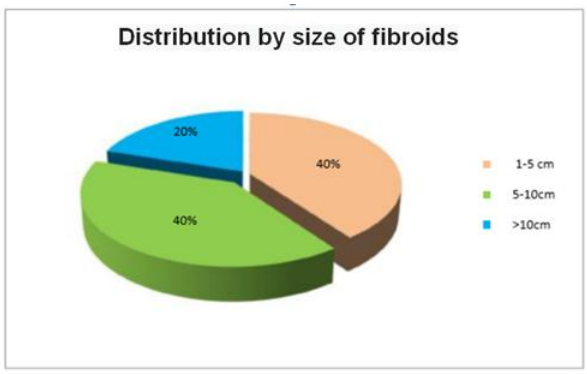

Fig-1: distribution by size of fibroids

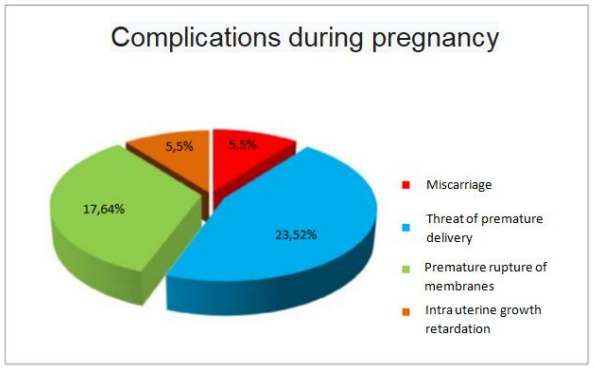

Fig-2: Distribution according to complications during pregnancy

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