

FIBROMA AND FERTILITY

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ABSTRACT

Uterine fibroids are present in 20% to 50% of women of reproductive age. The management of a woman with a fibroid and a desire for pregnancy is controversial. The pathophysiology of uterine myoma genesis is poorly understood; it is described as the result of a multifactorial process. The presence of myomas and alteration of fertility parameters are debated issues. Recent data in the literature allow a better understanding of the causal relationship and the effects on fertility of the therapies used. The different therapeutic modalities are conservative surgical treatment, medical treatment and interventional radiology. The results on fertility are variable. The management of interstitial myomas is much more debated and must be the subject of a multidisciplinary discussion, especially in situations associating other infertility factors. Myomas are also a source of complications during pregnancy.

KEYWORDS: Fibroma ; hysteroscopy ;myomectomy; fertility; treatment; desire for pregnancy.**INTRODUCTION**

The impact of fibroids on fertility depends on where they are located, and there is a reduction in fertility with submucosal and intramural fibroids, whereas subserous fibroids have no impact on female fertility, which suggests that a rigorous topographical assessment should be carried out prior to any operation.

In the case of sub-mucosal fibroids, simple resection generally allows fertility to be restored.

The therapeutic decision must take account of a well-balanced balance between the expected benefit and the risk incurred by myomectomy.

MATERIALS AND METHODS

All studies or series dealing with the relationship between myomas or myomectomy and fertility or infertility and indexed in the Medline database from January 1988 to December 2000 were included in our analysis. Only infertile patients were taken into consideration. In this group, the criterion for judgement was the clinical pregnancy rate. The context of natural procreation was separated from that of medically assisted procreation. Publications reporting an analysis of the factors influencing the pregnancy rate after myomectomy were also retained. Studies or series for which the proportion of infertile patients could not be determined, or those for which the follow-up was too short (less than

12 months), as well as reviews of the literature that did not include new cases were excluded from this analysis.

RESULTS AND DISCUSSION

In view of the different publications, and in a principle of less surgical invasiveness, hysteroscopic resection seemed to be reserved for the treatment of submucosal myomas. For subserous and interstitial myomas, the pregnancy rates observed after laparoscopic and laparotomic myomectomy were equivalent.^[2] Laparoscopy was also less hemorrhagic and required a shorter hospital stay than laparotomy. The use of LHRH analogue preoperatively did not significantly increase the pregnancy rate. Other factors, not directly involved in the surgical procedure, could have an influence on the pregnancy rate after myomectomy. Thus, age, especially over 35 years, a duration of infertility of over two years, association with other factors of infertility (tubal, ovarian pathologies, or spermatoc factors), and the posterior location of the myoma(s) decreased the pregnancy rates. On the other hand, resection of myomas responsible for menometrorrhagia increased the pregnancy rate; finally, certain factors inherent to the myomas, such as the size of the largest one, the total number of resected tumours and the imprint of the myoma on the endometrial cavity, did not seem to have an influence on the postoperative pregnancy rate. In a population of infertile patients, uterine myomas recognized as the sole cause of infertility would represent only 1 to 2% of patients. The responsibility of myomas has been demonstrated in modifications of endometrial vascularization, certain

endometrial dystrophies, quantitative and qualitative modifications of physiological uterine contractions and in the decrease in the production of Heparin Binding-Epidermal Growth Factor (HB-EGF), thus hindering embryonic implantation. Concerning the interest of myomectomy before MPA, the publications remain contradictory. The study by Seoudetal did not show any incidence of myomectomy on IVF results.^[1] However, the sample sizes in both groups (myoma patients and myomectomy patients) were small. In addition, no particular attention was paid to the type of myoma or the myomectomy technique. Finally, the results of these two groups were compared with those of all types of infertility (including male). Therefore, these results should be interpreted with caution. On the contrary, the study by Narayanetal showed a significant benefit in terms of pregnancy rate after hysteroscopic resection of submucosal myomas compared with a population of infertile women with a normal uterine cavity.^[2]

Furthermore, no deleterious effect of myomectomy on the pregnancy rate in IVF has been reported.

CONCLUSION

In the context of MAP, myomas, essentially submucosal and interstitial, constitute a factor of infertility. Their resection often appears to be legal and allows the pregnancy rate to be increased, particularly for submucosal myomas. It would not seem legitimate to propose an expectant attitude to a patient consulting for infertility whose only cause is the existence of a myoma. The therapeutic decision must take into account various parameters, including the age of the patient, the short delays in terms of results of MAP linked to the performance of a myomectomy. Conversely, this attitude must also take into account parameters such as the pregnancy rates obtained with MPA in patients with myomas and the limited number of IVF attempts currently reimbursed in France. In natural procreation, for lack of studies, no causal link between myoma and infertility has been demonstrated. However, myomectomy seems to be legitimate despite the difficulties and costs inherent in a prospective randomized study, and a study including a control group composed of infertile patients with myomas with an expectant attitude is necessary before formally concluding on the validity of myomectomy in natural procreation. These results will have to take into account the already identified factors of poor prognosis in terms of pregnancy rate. However, it remains to be determined whether such a study is ethically acceptable today.

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