

ABSTRACT

Introduction

In times of postponing the first pregnancy into the fourth or even fifth decade, there is a growing demand for fertility-saving procedures for these uterine diseases. As women age, fertility generally declines. The etiology of both diseases, as well as their relationship to infertility, remains uncertain. The prevalence of fibroids and adenomyosis is around 30 and 20 %. Treatment methods vary from pharmacological to surgical. In this study, we tried to compare two groups of patients with different types of fertility-sparing uterine surgeries and evaluate their reproductive outcomes. While myomectomy (the control group) can be considered a well-established procedure with standardized surgical steps and predictable fertility outcomes, resection of severe adenomyosis represents a newer and more controversial alternative to conservative therapy.

Methods

Patients of reproductive age with focal or diffuse adenomyosis who are planning pregnancy were included in the study. The diagnosis was performed ultrasonographically. Between 2004 and 2019, a total of 110 women underwent laparoscopic or open uterus-sparing surgery for clinically significant uterine adenomyosis (group A), diffuse adenomyosis (group AD), or fibroids (group B).

Results

Two groups of women who underwent different fertility-saving procedures were compared. We performed 55 resections of adenomyosis (group A) through laparoscopy or laparotomy. The control group included 55 women who underwent laparoscopic or open myomectomy for intramural fibroid (group B). Although all women entering the study had declared their wish to conceive, only 28 patients (group A1) and 24 women (group B1) finally aimed toward pregnancy. The pregnancy and delivery rates were, respectively, 75.0 % and 46.4 % in group A1 vs. 96.0 % and 70.8 % in group B1, with no significant differences between the two groups. When 44 women with resection of a more severe form of adenomyosis (diffuse adenomyosis, group AD) were compared with patients after myomectomy, the groups showed no significant differences in fertility outcomes, except for lower pregnancy rate and a higher proportion of

post-IVF pregnancies in the group AD1. The open surgical approach was significantly more frequently employed in group A (47.3% vs.16.4%; $p < .01$).

Conclusion

This study aimed to investigate the safety, feasibility, and fertility outcomes of patients with uterus-sparing surgical treatment of adenomyosis in comparison with patients treated with myomectomy. This is a novel report comparing reproductive function and outcomes between these two reproductive procedures. Despite the technical challenges, resection of adenomyosis seems to be a feasible option for women with severe adenomyosis and reproductive plans. Especially women of reproductive age with severe symptoms that are non-responsive to pharmacotherapy and with failure of infertility treatment may be candidates for laparoscopic or open adenomyomectomy. Women in the study who underwent surgery on the uterine muscularity, including both myomectomy and adenomyomectomy, had comparable reproductive outcomes with no significant differences.