

Effects of uterine fibroma on implantation and abortion in infertile patients under ART

Safdarian L.(M.D.)¹, Pirjani R.(M.D.)², Rahimi Forooshani A.(Ph.D.)³, Mohammad K.(Ph.D.)⁴ Saeidi H.(Ph.D.)^{5,6}.

1- Assistant Professor, Department of Obs & Gyn, Shariati Hospital, Faculty of Medicine, Tehran University of Medical Sciences, Tehran, Iran.

2- Resident of Obs & Gyn., Department of Obs & Gyn, Shariati Hospital, Faculty of Medicine, Tehran University of Medical Sciences, Tehran, Iran.

3- Assistant Professor, Department of Epidemiology & Biostatistics, Faculty of Health, Tehran University of Medical Sciences, Tehran, Iran.

4- Professor, Department of Epidemiology & Statistics, Faculty of Health, Tehran University of Medical Sciences, Tehran, Iran.

5- Assistant Professor, Department of Biochemistry, Faculty of Medicine, Tehran University of Medical Sciences, Tehran, Iran.

6- Embryologist, Department of Infertility, Shariati Hospital, Faculty of Medicine, Tehran University of Medical Sciences, Tehran, Iran.

Abstract

Introduction: Surveys indicate that 10-15% of couples in reproductive ages are infertile. Furthermore, 20% of women will develop a fibroid during their reproductive life. Fibroid is infrequently considered as a sole primary etiology of infertility. However, Considering the significance of infertility in gynecology and the prevalence of uterine fibroids in reproductive age, as well as the discrepancies in the results of different studies regarding the impact of fibroids on fertility, accurate management of fibroids in infertile cases deserves greater Consideration. Considering the disagreements in this background, the present study was designed to study the effects of uterine fibroids on implantation and abortion in assisted reproductive techniques.

Materials and Methods: In our cohort study 120 and 240 ART cycles in infertile patients with & without fibroma, respectively, admitted to Shariati Hospital in 2001-2003, were assessed for the effects of fibroids on implantation and abortion by using logistic regression analysis for confounding variables.

Results: Successful Implantation in patients with and without fibroma was 16.7% and 28.7% respectively, with a statistically significant difference ($P=0.014$, $OR=1.72$, $CI=1.1-2.7$). This relation was more prominent after logistic regression analysis for confounding variables, raising the adjusted OR from 1.72 to 2.17. Implantation rate, in less than 3 cm fibroma was more than 3.1 - 5 cm fibroma. Abortion rates in patients with and without fibroma were 71.4% & 34.9% respectively, that indicates abortion rate is significantly higher in the presence of fibroids even after elimination of other factors ($P=0.024$).

Conclusion: In this study the negative effect of fibroma on implantation and increasing rate of abortion were obtained by logistic regression analysis, however, further clinical trials are essential to verify the competence of operative resection of different size fibroids to improve the outcome of ART.

Key Words: Infertility, Fibroma, ART, Implantation, Abortion, Leiomyoma, and Cohort Study.

Corresponding Address: Dr. Safdarian L., Obs & Gyn Dep., Shariati Hospital, North Karegar St., Postal Code: 14114, Tehran, Iran.

Email: Safdarian@sina.tums.ac.ir