# COMPARISON OF SAFETY, EFFICACY, AND FERTILITY OUTCOMES OF LAPAROSCOPIC AND HYSTEROSCOPIC SURGERY FOR REMOVAL OF LARGE SUBMUCOSAL LEIOMYOMA

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**Abstract Body**

Objective: To compare the surgical and fertility outcomes of laparoscopic and hysteroscopic surgery in reproductive-aged women with large submucosal leiomyoma.

Methods: Women between the ages of 20 and 45 who underwent laparoscopic(multi-port or single-port) myomectomy(42 women) or hysteroscopic myomectomy(83 women) due to symptomatic submucosal leiomyoma(3-5cm) were enrolled. We compared basal characteristics, surgical outcomes, and fertility outcomes.

Results: There were significant differences in the operation time(96.3±35.22 vs. 55.4±23.34minutes, $p<0.001$), estimated blood loss(133.5±161.5 vs. 46.9±77.5ml, $p<0.001$), hospital days(4.1±0.4 vs. 1.7±1.1days, $p<0.001$) between laparoscopy and hysteroscopy group, respectively. There is no difference in the size of leiomyoma. Ten in the laparoscopy group and 7 in the hysteroscopy group had a desire to get pregnant after surgery. The live birth rate was 90%(9/10) in the laparoscopy group and 71.4%(5/7) in the hysteroscopy group. One patient in the laparoscopy group became pregnant but aborted. Two patients in the hysteroscopy group failed to conceive. All pregnant women of the laparoscopy group had cesarean section because of a history of myomectomy, but over half of the hysteroscopy group had vaginal delivery successfully. There is no significant difference in age, the time interval between surgery and pregnancy, gestational week at delivery, and pregnancy-related complications.

Conclusions: Hysteroscopy has advantages regarding surgical outcomes such as less operation time, estimated blood loss, and availability of vaginal delivery after surgery. Meanwhile, access and removal of larger submucosal leiomyoma via laparoscopy rather than hysteroscopy are affordable. There is no difference in fertility outcomes between the two groups. Both laparoscopic and hysteroscopic surgery is safe and effective for the removal of large submucosal leiomyoma and the acquisition of favorable future fertility outcomes.