**Abstract**

The objective of this paper is to compare assisted reproductive technology (ART) cumulative live birth rates after hysteroscopic proximal tubal occlusion and laparoscopic salpingectomy in endometriosis patients, for management of hydrosalpinx. This is an observational cohort study at a university hospital, including all endometriosis patients with hydrosalpinges undergoing ART, between January 2013 and December 2018. The patients underwent either laparoscopic salpingectomy or hysteroscopic proximal tubal occlusion with Essure® when laparoscopy was not an option (extensive pelvic adhesions at exploratory laparoscopy or a history of multiple abdominal surgeries with frozen pelvis). The diagnosis of endometriosis was based on published imaging criteria using transvaginal sonography (TVUS) and magnetic resonance imaging (MRI). Endometriosis patients with hydrosalpinges diagnosed by hysterosalpingography and/or TVUS and/or MRI were included. The primary outcome was the cumulative live birth rate. A total of 104 patients were included in the study; 74 underwent laparoscopic salpingectomy and 30 underwent proximal tubal occlusion with Essure®. The Essure® group had longer infertility durations (58.9 ± 30.0 months vs. 39.5 ± 19.1 months, p = 0.002) and a higher incidence of associated adenomyosis (76.7% vs. 39.1%, p < 0.001) than the salpingectomy group. The cumulative live birth rate was 56.6% after 44 ART cycles in the Essure® group and 40.5% after 99 ART cycles in the salpingectomy group (p = 0.13). In a population of endometriosis patients undergoing ART, women treated by Essure® for management of hydrosalpinx have similar cumulative live birth rates as women treated by laparoscopic salpingectomy.