Purpose

Aim of the present study is to determine the effects of bipolar electrocoagulation and intracorporeal suture on the ovarian reserve after ovarian cystectomy.

Methods

Sixty patients aged 18–42 years old and with a persistent adnexal mass were recruited to the study. Patients were randomized into suture hemostasis group or bipolar hemostasis group. Laparoscopic ovarian cystectomy was performed to all patients. Hemostasis was obtained by bipolar coagulation in 30 patients and by intracorporeal sutures in 30 patients. Serum levels of FSH, LH, estradiol, inhibin B and ultrasonographic measurements (antral follicle count and ovarian volume) were analyzed and recorded at day 3 of menstrual cycle, 1 and 3 months after the surgery.

Results

Basal FSH level measurement at the postoperative third month was significantly increased to 6.96 ± 1.86 mIU/ml ($p < 0.05$) in the bipolar electrocoagulation group. However, the decreased ovarian volume and antral follicle count was restored at the postoperative third month in the bipolar electrocoagulation group. Preoperative and postoperative FSH, LH, estradiol and inhibin B levels and ultrasonographic measurements were similar in the intracorporeal suture group.

Conclusion

The unwanted effect of bipolar electrocoagulation on ovarian reserve is probably transient and causes minimal damage to ovary. FSH levels may be slightly elevated. Gentle use of bipolar electrocoagulation or intracorporeal are not found to effect ovarian reserve.