

Effects of laparoscopic ovarian drilling on young adult women with polycystic ovary syndrome

林鈺山

Wu MH;Huang MF;Tsai SJ;Pan HA;Cheng YC;Lin YS

摘要

Abstract

STUDY OBJECTIVE: To assess changes in serum hormone levels and ovarian stromal blood flow after laparoscopic ovarian drilling (LOD) in young adult women with polycystic ovary syndrome (PCOS). **DESIGN:** Prospective, nonrandomized study (Canadian Task Force classification II-1). **SETTING:** Tertiary care, major teaching hospitals. **PATIENTS:** Anovulatory young women with PCOS who were resistant to clomiphene citrate. **INTERVENTION:** Laparoscopic ovarian drilling. **MEASUREMENTS AND MAIN RESULTS:** To evaluate the endocrinological effects of LOD, serum leptin, insulin-like growth factor-1, estrone (E1), and estradiol were measured before and after ovarian drilling in the early follicular phase. Three-dimensional transabdominal power Doppler examinations were performed to determine the effects of LOD. Serum leptin was correlated with body mass index (BMI) before LOD. Levels of BMI, fasting blood sugar, and leptin were higher and LH, LH/FSH, and the sugar/insulin ratio were lower in the obese group. There were significant decreases in the free androgen index, and total testosterone, luteinizing hormone (LH), and LH/follicle-stimulating hormone (FSH) levels, and a significant increase in sex hormone-binding globulin (SHBG) concentration in the 3 months after the operation. The vascularization index and vascularization flow index of the intraovarian stroma significantly decreased after treatment. Reversed correlations between leptin and LH, LH/FSH, E1, thyroid-stimulating hormone, and SHBG were noted 3 months after the operation compared with levels obtained before the operation. **CONCLUSIONS:** Treatment of young adult women with PCOS using LOD did not influence leptin levels but changed the ovarian stromal blood flow dynamics during short-term follow-up. The surgical procedure may be beneficial both to endocrine profiles and to intraovarian stromal flow in patients with PCOS.