Plasma metastin levels are positively correlated with LH in women with polycystic ovary syndrome

Context: Metastin (kisspeptins), a family of neuropeptides encoded by the Kiss1 gene that are mainly expressed in discrete neuronal populations of the hypothalamus, have recently emerged as essential upstream regulatory elements of GnRH (gonadotropin-releasing hormone). Objectives: This study is designed to measure metastin levels in women with PCOS, a condition associated with aberrant gonadotropin secretion and hyperandrogenemia; and investigate the possible correlations between metastin and PCOS-related reproductive and metabolic disturbances.

Patient(s): 130 women with PCOS (BMI <= 30 kg/m2) and 122 control (BMI <= 30 kg/m2) (ovulatory women without clinical or biochemical hyperandrogenemia) were selected. Intervention(s): Blood samples were collected between day 3 and day 6 of a spontaneous bleeding episode in the PCOS groups and a menstrual cycle of the controls, at 8:00 AM, after an overnight fast. Main Outcome Measure(s): Circulating levels of LH, FSH, progesterone (P), testosterone (T), androstenedione (A), hormone-binding globulin (SHBG), insulin, glucose, and metastin were measured. Result(s): No significant differences in level metastin were detected between the PCOS and control groups. LH levels were significantly higher in the PCOS group compared to controls, and a positive significant correlation between metastin and LH levels was observed.

Conclusions: Although metastin levels were found to be normal in women with PCOS; yet, there is a relationship between metastin levels and hormonal pattern of PCOS.