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

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Context: Metasin (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 are designed to measure metasin levels in women with PCOS, a condition associated with aberrant gonadotropin secretion and hyperandrogenemia; and investigate the possible correlations between metasin 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 metasin were measured. Result(s): No significant differences in level metasin were detected between the PCOS and control groups. LH levels were significantly higher in PCOS group compared to controls, and positive significant correlation between metasin and LH levels was observed

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