

Differences in gonadal hormone levels in women with treatment resistant depression and treatment responsive depression

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Context: Major Depressive disorder has been associated with alterations in the hypothalamus-hypophysis-adrenal axis,. The former alterations can be reversed by antidepressant treatment. The mechanisms proposed include the involvement of certain gonadal hormones. Estrogen interacts with some serotonergic receptors. Likewise HHA axis alterations can cause an increase in glucocorticoid secretion, this can also impact in mood.

Objective: Compare gonadal hormone levels of women in reproductive age with diagnosis of pharmacologic treatment resistant depression (TRD) and women with diagnosis of pharmacologic treatment respondent depression.

Methods:We conducted a case and control study, observational. Female patients from outpatient service at the National Institute of Psychiatry in Mexico City were assessed.

Patients: Patients were required to be in reproductive age according to STRAW (Stages of Reproductive Aging Workshop) criteria.

Intervention: Lutheinizng hormone, testosterone, progesterone, estradiol and follicle stimulant hormone were measured in the follicular phase of the menstrual cycle.

Main Outcome Measures: The sample was formed by 18 patients with an average age of 34.7 years, all of them were in reproductive age. The (TRD) patients were older compared with the treatment respondent age patients. The gravity of the depressive symptoms measured by the Hamilton Depression Scale scored higher in patients with (TRD) than in patients with treatment respondent depression . Regarding hormonal levels no differences were found in the serum concentration between groups, however estradiol was positively correlated for the presence of late insomnia, psychomotor inhibition and somatic anxiety. Also it was positively correlated with suicidal ideation. When correlation analysis was carried between gonadal hormones and the belonging to either the treatment resistant depression group or the treatment respondent depression group, the correlation found was negative for progesterone and treatment resistant depression.

Conclusions: In this sample we didn't find any differences in serum levels of sex hormones between groups. Regarding the negative correlation found between progesterone and belonging to the TRD group, previous studies have associated low progesterone levels with mood symptoms, particularly with premenstrual dysphoric syndrome.

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