

Anxiety, anger, sadness and depressed mood have high correlation coefficients and a cyclical pattern in women who use oral contraceptives and in women who do not use them



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Abstract

Background: Changes in mood during the menstrual cycle have affected the literature especially in relation to the so-called “premenstrual dysphoria” or premenstrual dysphoric disorder” (PMD). Since PMD and depression are observed to a significant extent also in women who have been taking estrogen-progestogen oral contraceptives (OC), in the present study, we want to evaluate whether emotional and mood variables of a self-rating scale (SRS) have a behavior in OC and normal menstruating (NM) fertile women.

Methods: In 15 fertile young women (8 NM and 7 OC) we measured the correlations (R) and the significance (p) of each of the 12 SRS variables against the others every day during the cycle. A statistical comparison between them and standardized spline curves of their progress during the menstrual cycle was made.

Results: The variables Anxiety, Anger are the most correlated to each other ($R=0.891$, $p<0.001$) in all women (NM and OC) during MC. This relationship is prevalently due to OC women ($R=0.976$, $p=0.004$); in NM women $R=0.766$ and p

$=0.131$ n.s. A high correlation between Low Mood and Sadness is observed in OC women ($R=0.801$, $p=0.067$) but not in NM. All the components of SRS have cyclical variations. In OC women Sadness, Anxiety, Anger-Irritability Low Mood (AxAnLM) are highly correlated, have much more and higher level of cyclicity than NM ones and the maximum is reached at 14th day. Differently in NM the cyclicity is much lower and the maximum level is reached in the 20th day.

Conclusions: The high correlation found between (AxAnLM), which are the main symptoms of PMD and depression, shows that these important variables' behavior may be easily controlled during the menstrual cycle with a SRC questionnaire used to personalize the study of each patient. AxAnLM represents emotional behavior and are present in both groups of women but higher at mid cycle in CO women who do not have gonadotropin FSH/LH peak.

These data may lead therefore to hypothesize the presence of a Serotonergic Brain Center (SBC) which may be involved at the same time at least in the cyclic regulation both of certain groups of emotional mechanisms and the pituitary gonadotrophic hormones in NM and OC women.

Biography

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