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Document Title : *THE RELATIONSHIP OF STRESS AND HORMONES TO BREAST CANCER*
علاقة الضغط النفسي والهormونات بسرطان الثدي

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Abstract : Breast cancer is the most common type of cancer and second leading cause of death in women, following lung cancer, about 1% of all breast cancer occurs in men. When women suffered from depression, it results in increased levels of some hormones such as cortisol, estradiol leading to cell proliferation and abnormal cell growth. Decrease level of progesterone and androgen, however, causing decrease level of superoxide dismutase, which protects the body from free radicals that weakens the body immune system, mainly the natural killer cells which are capable of detecting and killing cancer cells that cause cancer. In the current work, stress hormones such as prolactin and cortisol as well as female hormones such as estradiol and progesterone and male hormones such as androgen (androstenedione) as well as superoxide dismutase (SOD) were investigated in the blood serum of some Saudi female breast cancer patients. By using significant regression equation, it was confirmed that there are a relation between stress, cortisol, estradiol, androgen, progesterone and SOD and breast cancer. According to the clinical investigation on the patients, there was a high risk of breast cancer in relation to early menarche, age at first birth, obesity, drug medication and hormone replacement therapy (HRT). The high significant difference was observed between control subjects and patients in relation to estradiol, progesterone and androstenedione levels while their was no significant difference between control subjects and patients in relation to prolactin, cortisol and SOD. A positive result was obtained with woman who received HRT and fertility drug had a chance of about 19.5 times and 11.5 times to get breast cancer than those who did not receive that treatments.

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