

Levels of Estrogen and Progesterone in postmenopausal Breast cancer patients

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Abstract

This study was performed with an objective to compare the levels of estrogen and progesterone in postmenopausal breast cancer patient with age matched healthy controls. We performed a cross-sectional comparative study of two age matched groups of postmenopausal participants: 25 participants (cases) had carcinoma of breast and the other 25 participants (controls) were healthy females. The women with breast cancer had a mean age of 53.6 years and the healthy women had a mean age of 52.2 years. Blood samples were collected from all participants and assayed for serum estrogen and serum progesterone. The estrogen and progesterone levels in cases were significantly high as controls ($p = <0.001$ and $p = <0.05$ respectively). Estrogen levels were also significantly correlated with progesterone levels ($r = 0.540$, $p < 0.05$). In conclusion, study suggest that estrogen and progesterone should be routinely estimated in breast cancer patients for better treatment approaches as well as monitoring of disease progression.

Keywords: Postmenopausal, Estrogen, Progesterone, Breast cancer, Women

INTRODUCTION:

Worldwide, breast cancer is a most common invasive cancer in women. India also, 27% (2012) among all diagnosed cancer in females.[1]

It occurs more commonly in the developed countries, accounting for 3-5% of deaths while its incidence is 1-3% in developing countries. Carcinoma of breast is extremely rare below 20 years of age but thereafter the incidence steadily rises. At the age of 30 years the incidence is 1:622 females. at the age of 60 it is 1:24 females and by the age of 90, the incidence is 1:8 females [2]

Incidence- according to Breast Cancer India, globally the incidence and mortality of breast cancer risin from 13,84,000 cases and 4,58,000 deaths(2008) to 16,77,000 cases and 5,22,000 deaths(2012). In India also increased from 1,34,420 cases (2008) to 1,44,937 cases(2012).[1]

Primary risk factors - female sex and older age.[3] Other risk factors - delayed childbearing, no breastfeeding, higher hormone levels, obesity and diet.[4-6] Postmenopausal > pre-menopausal females. The ratio of female to male breast cancer incidence is approximates 100:1.[2]

Epidemiologic data now provide strong evidence for an influence of plasma steroid hormones on the risk of breast cancer in postmenopausal women.[7] The associations between the risk of breast cancer and the level of estrogens and androgens (with relative risks [RRs] for breast cancer ranging from 2.0 to 2.5 when comparing the top 20% with the bottom 20% of hormone levels) are strong compared with those of most other breast cancer risk factors. However, few studies have investigated these associations as stratified by tumor receptor status or by invasive versus in situ disease. In addition, studies of the effect of postmenopausal hormone use suggest that formulations

Uric acid in men with acute stroke

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Abstract

Higher levels of uric acid in men as compared to women can be a reason behind greater incidence of stroke in men. The objective of the present study was to evaluate the levels of uric acid in men with acute stroke and correlate with stroke severity. For the purpose of the study, 50 male patients of acute stroke admitted to the hospital and 50 age matched healthy controls were included in the study. Routine biochemical parameters including fasting blood glucose, uric acid and lipid profile were assessed in serum obtained from 5 ml of fasting blood sample. Patients with kidney or liver diseases, malignancies, diuretic use, alcohol intake, on iron or antioxidant therapy were excluded from the study. Initial stroke severity was measured by the National Institute of Health Stroke (NIHS) scale. It was found that, among the 50 cases, 38(76%) had ischemic stroke and 12(24%) had hemorrhagic stroke. Serum uric acid levels were very significantly higher in cases ($p < 0.001$) than controls. There was strong positive correlation between uric acid levels and initial stroke severity ($p = 0.006$, $r = 0.386$). Also, serum uric acid showed a statistically significant correlation with fasting blood glucose, TG and VLDL and an inverse association with HDL in both cases and controls. The conclusion drawn was that the significantly higher levels of uric acid in men with stroke and the positive association of uric acid with stroke severity suggest a possible role of uric acid as a risk factor for stroke in men.

Keywords: Uric acid, Acute stroke, Men, Stroke severity

Introduction

Stroke is one of the leading causes of mortality and morbidity worldwide, afflicting approximately 20 million people each year and causing 5 million deaths.^[1] Although the etiopathogenesis and risk factors have been elucidated to a great extent, one intriguing aspect of stroke is its higher incidence in men than women, suggesting that male sex is an important risk factor. Uric acid, which has higher levels in men as compared to women, may have an important role in this. However, studies regarding role of uric acid in stroke have produced inconsistent results so far. Increased uric acid levels have been found to be associated with established risk factors of stroke such as hypertension, dyslipidemia, obesity and diabetes.^[2] Also, significantly higher risk of stroke incidence and mortality was reported in cases of hyperuricemia.^[3] In the general elderly population too, high uric acid levels were independently associated with increased incidence of fatal stroke.^[4] But, contrary to this, other studies have advocated uric acid to be neuroprotective due to its antioxidant action.^[5,6] There is also disagreement regarding the role of uric acid in stroke severity and outcome. While Weir et al reported that increased serum urate levels predicted poorer outcome in patients of stroke, other studies found higher levels of serum urate to be associated with better outcomes following stroke.^[6,7,8] Considering these conflicting findings, our