Abstract

Background: Carcinoma of Breast is one of the most common surgical problems in Libya especially in younger female subjects. Breast cancer is the most dreadful disease in terms of quality of life, though heart disease is a more common cause of mortality here. The present study was designed to evaluate the early diagnostic indicator role of serum uric acid levels in patients suffering from carcinoma breast.

Materials and methods: 100 patients with a classical presentation of a lump in the breast have been selected from an age group ranging from 16 to 65 years with a mean age of 37 years from the department of surgery, 7th October hospital, Benghazi, Libya (2009 and 2010). 43 healthy controls with an age group from 20 to 55 years with a mean age of 35 years were also selected. Out of the 100 cases of lump in the breast, 83 were found to be benign and 17 were malignant irrespective of age. Serum uric acid estimation was done in all the patients after an overnight fast. The biochemical test was performed using an authentic method.

Results: Serum Uric acid level was found to be significantly raised (p = 0.0270) in patients with benign breast cancer when compared to age matched controls. In the case of malignant breast cancer, the uric acid levels are observed to be increased but not significant (p = 0.599). When the serum levels of uric acid were compared between the benign and malignant, it was observed to be slightly raised in benign rather than in malignant but not a significant rise (p = 0.321).

Conclusion: An increase in the serum uric acid levels in carcinoma breast is suggestive of increased adenosine deaminase activity and increased xanthine oxidase activity. However, the values did not rise significantly in malignant breast cancer patients when compared to the controls. This observation in our study suggests a possible role of uric acid as an antioxidant in combating the oxidative stress in patients with malignant tumors.