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HOW USEFUL IS URINE PROTEIN IN THE DIAGNOSIS AND PROGNOSIS OF BREAST CANCER IN WOMEN?

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ABSTRACT

Objective: Is to assess the possible use of urine protein as a source of antigen in a serological examination in breast cancer diagnosis.

Method: This study enrolled 30 females, aged 27-70 years from Basrah Hospitals. Those women were diagnosed to have breast cancer by fine needle aspiration biopsy. Also 20 apparently healthy women from out-patients department were involved in this study as a control group. Urine samples were collected from patients and control groups and stored at -20^{o}C. Blood samples were also collected from patients as well as control group, centrifuged and then serum stored at -20^{0}C.

Isolation and purification of antigen from breast cancer patients urine were done. Gel filtration chromatography was carried out after dialysis. Paper electrophoresis was performed by using cellulose acetate paper. Enzyme immunoassay for detection of antigen by serum antibody.

Results: Urine protein was isolated by ammonium sulfate precipitation and purified by gel cghromatography, then used as a coating antigen for detection of specific antibody in the serum of breast cancer patients by ELISA test. The readings of the optical density for breast cancer patients (0.82±0.24 nm) was significantly higher than the control group (0.19±0.09 nm), thus it gaves a positive results for breast cancer patients and negative for the control group.

Conclusion: ELISA test by using urine protein coating antigen provide a hope for the development of non-invasive breast cancer screening and or diagnostic laboratory test.

KEYWORDS: Breast Cancer, ELISA, Protein, Women, Urine

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