

Breast Cancer. Screening Criteria

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Abstract

Breast cancer is the most frequent type of neoplastic disease in women, amounting to approximately 26% of all annually diagnosed cancers, and representing the second leading cause of female death after pulmonary cancer. Although the prognosis of the disease has improved in recent years, an important number of patients will suffer an evolution of the disease and will die due to this malignancy, which remains resistant to various cytostatic drugs, this being the main cause for therapeutic failure in over 90% of patients with a neoplastic development at this level. As a genetic evaluation of the resistance to chemotherapy is difficult to obtain under the current clinical practice conditions, we desired to follow a series of parameters which were easy to evaluate, and which could be correlated with resistance to chemotherapy. Further on, we shall report a clinical case of a patient presenting with chemotherapy resistant breast cancer and unfavourable prognostic factors, in which we determined the biochemical parameters for oxidative stress (serum monoaldehyde – a marker of lipid peroxidase, serum ceruloplasmin – whose activation stimulates an overproduction of reactive species of oxygen, plasmatic albumin thiol groups – important components of antioxidant defence, total serum antioxidants – which measure the ability of the plasma to resist in face of the effects of reactive species of oxygen), correlated with an apoptosis evaluation (scheduled cellular death) performed on fresh tumoral tissue. Histopathological, immunohistochemical and flowcytometry data correlated. Even if the results obtained indicate a high oxidative stress status and a diminished capacity of endogenous antioxidant defence, it appears that this oxidative stress alone was not potent enough to induce the desired tumoral cytotoxicity.

Key words: breast cancer, resistance to chemotherapy, evaluation

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