

PROGNOSTIC VALUE OF CIRCULATING CYTOKINES IN BREAST CANCER: A PROSPECTIVE STUDY IN 60 BREAST CANCER PATIENTS

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Introduction: Breast cancer is the 2nd most common malignancy and 5th most common cause of cancer mortality worldwide. Inflammation may contribute to the development and the progression of cancer. The aim of this study was to measure circulating cytokines (IL17, IL6, IL22, IL23 and TNF α) and their correlation with prognostic factors in breast cancer.

Methods: Serum samples were prospectively collected from sixty breast cancer patients. Levels of TNF- α and IL6 were determined with the technique of a solid-phase, two-site chemo-luminescent enzyme immune-metric assay (Immulite 1000, USA). Serum levels of IL17, IL22 and IL23 were measured by enzyme-linked immunosorbent assays (ELISA sandwich).

Results: The mean age of patients were 48 years, 25% of them were metastatic. The mean level of cytokines IL6, IL17, TNF α , IL22 and IL23 were respectively 4.80 \pm 7.26 pg/ml (min 2, max 36.80 pg/ml); 0.27 \pm 0.69 pg/ml (min 0, max 3.62 pg/ml); 5.93 \pm 2.27 pg/ml (min 4, max 15.30 pg/ml); 50.82 \pm 34.78 p/ml (min 26.48, max 199.48 pg/ml) and 18.05 \pm 30.91 pg/ml (min 0, max 200.21 pg/ml). Serum IL6 levels were significantly higher with advanced stages (p=0.013) especially with metastatic one (p=0.001) and strongly elevated with patients who relapsed (p=0.010). High levels of TNF α were also significantly associated with advanced stage (III and IV) (p=0.019) and of IL22 with high SBR grade III (p=0.028); IL23 was significantly increased with lymph nodes metastasis (p=0.042) and young patients <35 years (p=0.034). Finally, levels of IL17 was significantly higher with patients who relapsed (p=0.018).

Conclusion: Our results highlight the role of cytokines in the serum as potential prognostic biomarkers in breast cancer patients which could contribute to tumour growth and progression. So analysing serum cytokine levels may help to identify patients with poor prognosis who may benefit from more aggressive treatment.

Biography

Jihene Ayari Braham has completed her Doctorate degree from Faculty of Medicine, Tunis University in 2006. She has completed her Diploma in Clinical Oncology (University of south Paris) and Diploma in Digestive Cancerology (university of ParisV) in 2010. She is an Assistant and Consultant in Medical Oncology and Hematology Malignancies at Military Hospital oncology department, Tunis since 2013. She is teaching candidates of Masters, Medical doctorate and Fellowships degrees of Medical, Radiation and Surgical Oncology at Military Hospital, Oncology Department, Tunis University from 2012 till now. She is the Supervisor of training program of residents, assistant lecturers, candidates of Masters and Medical Doctorate degrees, MHT, Tunis University since 2015. She is a Member of European Society for Medical Oncology (ESMO), Member of American Society of Clinical Oncology (ASCO) and Member of STOM (Tunisian Society of medical Oncology).

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