ASSESSMENT OF LYSOSOME-ASSOCIATED MEMBRANE PROTEIN (LAMP5) IN NEWLY DIAGNOSED MULTIPLE MYELOMA PATIENTS AND CORRELATION TO CLINICAL OUTCOME

Nahed Moawad Ibrahim Rakha MD1, Amal Mostafa El Afifi MD1, Ghada Maged Mohsen MD2, Rana Zakaria Abbas MD1, Shrouk Mahmoud Salah MS1, Haydi Sayed Mohamed MD1
1Department of Internal Medicine and Clinical Hematology, Faculty of Medicine, Ain Shams University, Cairo, Egypt.
2Department of Clinical Pathology, Faculty of Medicine, Ain Shams University, Cairo, Egypt

Ain Shams University Hospitals

Introduction

Lysosome-associated membrane protein 5 (LAMP5) is one of the glycosylated proteins that are implicated in several different features of cell biology and can impact cellular processes such as phagocytosis, autophagy, lipid transference, and aging. Interestingly, LAMP5 has a significant role in cancer progression, metastatic spread, and aggressiveness. It has been reported to be significantly expressed in many hematopoietic malignancies such as leukemias and multiple myeloma (MM).

Aim

This study used enzyme-linked immunosorbent assay (ELISA) to measure the level of LAMP5 in newly diagnosed MM patients, and the level was correlated to the clinical outcome of the patient.

Methods

A prospective study was done on 64 people, including 32 newly diagnosed MM patients and 32 age- and gender-matched healthy controls. ELISA was used to assess the levels of LAMP5 in serum samples. Clinical data and LAMP5 expression correlations were assessed.

Results

MM patients' LAMP5 levels were found to be statistically significantly higher than those of healthy controls ($P<0.0001$), However, LAMP5 does not correlate with clinical outcomes, laboratory results, or patient clinical data.

Summary

This report emphasizes that LAMP5 expression in newly diagnosed MM patients was highly significant by ELISA, but its influence on patient prognosis is still unclear as there was no significant correlation with other clinical data. This indicates more research is needed on a larger scale of patients to determine the significance of its expression on prognosis.