

Assessment of the serum and tissue levels of Endocan in Mycosis fungoides patients

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Abstract : Background: Although mycosis fungoides (MF) is considered to be the commonest form of primary cutaneous T-cell lymphomas (CTCL), categorized into stages based on clinical, pathological & visceral involvement. Endocan emerged in the past years as a reliable prognostic factor in several cancers, and was tied to the pathogenesis of cancers; hence endocan represents a promising therapeutic target for cancers in the future.

Aim: The aim of this work is to study MF patient's serum endocan level, & tissue endocan level of different stages in comparison to controls, assessing the possibility of using endocan as a prognostic factor in M.F.

Materials and Methods: Twenty five patients with MF and fifteen age and sex matched healthy controls were enrolled in the study. The tissue and serum expression of Endocan (ESM-1) were measured using enzyme-linked immunosorbent assay (ELISA) technique.

Results: The mean tissue level of ESM-1 was significantly higher in patients (2907.8 ± 4575 pg/gm), than in controls (59.1 ± 15 pg/gm) ($p < 0.001$). A strong positive statistical correlation was detected between the tissue ESM-1 levels of MF patients and the stage of the disease ($p < 0.001$, $r=0.658$), also with the extent of lesions in MF patients ($p < 0.001$, $r=0.771$). A statistically significant rise was detected in the tissue ESM-1 levels compared (mean value 2907.8 ± 4575) to the serum ESM-1 levels in MF patients (mean value 19.9 ± 71.7 , $p < 0.001$), with a positive statistical correlation ($p= 0.024$, $r= 0.449$). The mean serum ESM-1 level was not statistically significant in patients (19.9 ± 71.6 pg/ml), compared to controls (7 ± 2.8 pg/ml) ($p = 0.086$). No statistically significant correlation was detected between the serum ESM-1 levels and the stage of the disease ($p= 0.218$).

Conclusion: These study findings prove that tissue endocan or ESM-1 levels are elevated in MF patients, and are positively correlated to the clinical stage of the disease and with the extent of lesions, suggesting its possible role as a prognostic factor in MF.

Keywords : endocan (ESM-1), mycosis fungoides (MF), prognosis, enzyme-linked immunosorbent assay.