PLASMA LEVELS OF GROWTH ARREST SPECIFIC PROTEIN (Gas٦) AND THE SOLUBLE FORM OF ITS TYROSINE KINASE RECEPTOR AXL (sAxl) IN HEPATITIS C VIRUS INFECTED PATIENTS WITH AND WITHOUT DIABETES MELLITUS

Thesis

Submitted in partial fulfillment of the master degree in

Medical Microbiology and Immunology

Presented by

EL Shaimaa Gomaa Ali Salem

(M.B.B.Ch)

Faculty of medicine

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Abstract

Aim of the work: Growth arrest specific protein ٦ (Gas٦) and its tyrosine kinase receptor Axl (sAxl) plays an important role in inflammation and autoimmune disease, therefore, we investigated their plasma concentrations in hepatitis C virus (HCV) infected patients with and without diabetes mellitus (DM) and correlated them to symptoms and signs of HCV infection and DM.

Methods: Blood samples from ٩٠ subjects divided into four groups (٢٥ patients with chronic infection HCV without DM, ٢٥ patients with chronic HCV and DM, ٢٥ patients with DM without HCV and ١٥ controls) were assayed for plasma Gas٦ and sAxl levels by ELISA. Detection of HCV antibodies in patient serum was performed by ELISA. Positive cases of HCV by ELISA were confirmed by real time RT- PCR.

Results: The plasma Gas٦ and sAxl levels were significantly higher in chronic HCV (with liver cirrhosis) versus other groups (P< ٠.٠٠١). Among patients with both HCV and DM, the plasma Gas٦ concentrations were significantly higher versus patients with DM alone (p=٠.٠٠٤) and controls (p٠.٠٠٢) and the plasma sAxl concentrations were significantly lower than patients with HCV alone (P< ٠.٠٠١) but no significant difference between HCV +DM group versus control and DM group (p> ٠.٠٥). As regards to DM group, insignificant increase in plasma levels of Gas٦ was detected in patients as compared to those controls (p> ٠.٠٥). On the other hand, plasma levels of sAxl were insignificant decreased in DM patients versus controls (p> ٠.٠٥).

Conclusions: Alteration of plasma concentrations of Gas٦ and sAxl in patients with both HCV and DM could have a role in disease pathogenesis.

Key words: Gasl, sAxl, HCV, DM.