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Relationship of plasma level of nesfatin, chemerin and vaspin to early atherosclerotic changes and its genetic study in adolescent type 1 diabetic patients

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Objective: To evaluate the relationship of plasma level of nesfatin, chemerin and vaspin to early atherosclerotic changes. Also to evaluate chemerin and vaspin genotype and to detect its relation to glycemic control and atherosclerosis in adolescent type 1 diabetic patients.

Patients & Methods: The study included 70 type 1 diabetic patients and 30 age and sex matched healthy volunteers. The mean age of patients was 17.99±2.59, mean duration of diabetes was 10.91±3.54, mean onset of disease was 7.00±3.28. Blood samples were taken for assessment of chemerin, nesfatin, vaspin, and oxidized low-density lipoprotein (OxLDL) by enzyme linked immunosorbent assay (ELISA) technique. Also, blood samples were taken for analysis of glycosylated hemoglobin (HbA1); lipid profiles and urine samples were taken for assessment of albumin/creatinine ratio. Carotid (cIMT) and aortic (AIMT) intima-media thickness were also done.

Results: Nesfatin, chemerin, vaspin, OxLDL, and albumin/creatinine ratio, cIMT and AIMT were significantly higher in diabetic patients. HbA1 and cIMT were significantly higher in TT genotype of chemerin than GG genotype (9.50±1.99 vs. 8.34±1.62 and 0.54±0.06 vs. 0.50±0.04 respectively). Chemerin and vaspin had a significant positive correlation (r=0.2, P=0.05), nesfatin and LDL (r=0.3, P=0.05) and Vaspin and body mass index (r=0.3, P=0.01).

Conclusion: Diabetic patients had increased level of adipocytokines and are liable for early atherosclerosis. TT genotype in diabetic patients is associated with poor glycemic control and early atherosclerosis.

Biography

Ahmed A Battah has international experience in various programs, contributions and participation in different countries for diverse fields of study. His research interests reflect in his wide range of publications in various national and international journals.

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