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EVALUATION OF FLOW MEDIATED VASODILATATION OF THE BRACHIAL ARTERY AS A MARKER OF ENDOTHELIAL DYSFUNCTION IN HYPOTHYROIDISM

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Introduction: This study was conducted in Endocrine and Diabetes Clinic (Cairo University) from 2016-2017 to evaluate endothelial function using flow mediated vasodilatation (FMD) of brachial arteries in subclinical hypothyroidism (SHT) to provide a possible evidence for treating all patients with SHT.

Patients & Methods: The study included 48 women with primary hypothyroidism and 9 women as a control group. Hypothyroid patients were divided to: Group I (overt hypothyroidism: OHT) (n=24): elevated serum TSH, low FT3 & FT4 and were subdivided into: Group IA: (n=6) on L-thyroxine with controlled hypothyroidism: TSH in the laboratory reference range (0.4-4.1 µIU/ml). Group IB: (n=18), 7 were naïve for L-thyroxine and 11 on L-thyroxine with uncontrolled hypothyroidism (TSH>4.1 µIU/ml). Group II (SHT) (n=24): elevated serum TSH, normal FT3 & FT4, n=24 were not receiving L thyroxine subdivided into: Group IIA: (n=10): TSH (4.1-10 µIU/ml). Group IIB: (n=14) TSH (>10 µIU/ml).

Results: FMD was significantly lower in the different hypothyroid subgroups than control group and was comparable among the

4 hypothyroid subgroups with no correlation with serum TSH (Right: 16.19±12%, 9.12±13.23%, 14.5±24.7%, 11.3±8.5%, 21.87±2.78% in groups IA, IB, IIA, IIB, control respectively (P<0.019). Left: 12.04%±9.49%, 12.64±14.53%, 11.85±14%, 9.56±6.75%, 21.83±5.18% in groups IA, IB, IIA, IIB, control respectively (P<0.002)).

Conclusions: Endothelial dysfunction is present in OHT and SHT regardless the level of TSH. The role of L-thyroxine in improving endothelial function is not consistent.

Biography

Dr Elham Mohamed yousief , lecturer of internal medicine , diabetes and endocrinology at faculty of medicine , cairo university .I have master and PHD degree for internal medicine , also master degree for diabetes , endocrinology , clinical nutrition and metabolism. Five published research. No previous award and presentation at any conference.

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