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شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



شبكة المعلومات الجامعية

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التوثيق الالكتروني والميكروفيلم

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**EVALUATING SERUM LAMININ AND INSULIN LIKE
GROWTH FACTOR 1 AS RISK FACTORS FOR
PROLIFERATIVE DIABETIC RETINOPATHY**

Σ.Υ.Ν.

THESIS

Submitted for partial fulfillment of the MD degree
in Medical Biochemistry

BY

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ABBREVIATIONS

| | |
|--------------------------------|---|
| AIRs | Anti insulin receptors antibodies. |
| BMs | Basement membranes. |
| D M | Diabetes Mellitus. |
| DR | Diabetic retinopathy. |
| FN | Fibronectin |
| GAG | Glycoseaminoglycan. |
| GH | Growth hormone . |
| IAA | Insulin autoantibodies. |
| ICA | Islets cell antibodies. |
| IDDM | Insulin Dependent Diabetes Mellitus. |
| IGF 1 | Insulin like growth factor 1 . |
| IGFBPs | Insulin like growth factor binding proteins. |
| NIDDM | Non Insulin Dependent Diabetes Mellitus . |
| NSILA | Non suppressible insulin like growth effects. |
| PDGF | Platelets derived growth factor. |
| PDR | Proliferative diabetic retinopathy. |
| PRP | Panretinal photocoagulation. |
| SMS | Somatomedin C . |
| TMA | Thrombotic microangiopathy. |
| TNF-α | Tumor necrosis factor alpha. |
| UT | Untranslated exons . |

ABSTRACT

Serum levels of both laminin and IGF-1 exhibited significant elevation in the four diabetic groups studied compared with control subjects ($p < 0.0001$). Furthermore, serum levels of IGF-1 exhibited significant elevation in diabetics with proliferative retinopathy compared to those without retinopathy ($p < 0.05$ in type I , $p < 0.0001$ in type II diabetics), whereas serum laminin levels exhibited insignificant differences between diabetics with proliferative retinopathy and those without proliferative retinopathy but its levels were still higher in both diabetic groups than control subjects. These data suggest that IGF-1 but not laminin might play a role in the pathogenesis of proliferative retinopathy and should be evaluated as a prognostic biochemical marker for proliferative diabetic retinopathy. Furthermore , results of this work demonstrate that in all diabetic groups studied, there was a significant positive correlation between serum levels of IGF1 and serum levels of laminin ($p < 0.001$), there was also a significant positive correlation between serum levels of either IGF1 or laminin and glycosylated haemoglobin levels ($p < 0.001$ for laminin and $p < 0.01$ for IGF1). there was also a significant positive correlation between serum levels of either IGF1 or laminin and the duration of diabetes ($P < 0.001$). On the contrary, there was a significant inverse correlation between serum levels of IGF1 and age of patients in all diabetic groups ($p < 0.001$).

Key words

- DM
- Insulin like growth factor type I (IGF₁)

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