

RESEARCH ARTICLE

Evaluation of Complement Components (C3 and C4) in Diabetic Retinopathy patients

Nisreen Waleed Mustafa College of Pharmacy, University of Basrah, Iraq

*Corresponding Author E-mail: jannathul.firdous@unikl.edu.my

ABSTRACT: The aim of this study was to determine the role of complement system in pathophysiology of retinopathy disease via assessment the level of C3 and C4 in diabetic retinopathy (DR) and non-diabetic retinopathy (NDR) patients. For this purpose 40 sera of retinopathy patients were collected, 30 samples were obtained from DR patients which included 15 DR with Type 1 and 15 DR with Type 2, beside 10 samples were collected from NDR patients. Control group included 20 sera from healthy peoples. The mean of C3 concentration in DR, NDR and control group showed significant differences between C3 level among DR (231.373mg/dl) and control group (122.053 mg/dl). The same result was recorded regarding mean of C3 concentrations among NDR (225.471 mg/dl) and control group. Data analysis showed no significant difference between C3 concentrations mean in Type 1 (215.366 mg/dl) and Type 2 (227.927 mg/dl). Regarding C4 no significant differences were obtained among all study groups DR , NDR, C, type 1 and type 2 (39.926 , 37.11, 35.94, 41.586 and 38.266 mg/dl , respectively). The result of HbA1c test revealed significant elevation in DR (7.852%) when compared with NDR (5.085%) and control group (5.026%). Alternatively, significant alteration was detected between HbA1c value Type 1 (8.366%) and Type 2 (7.290%). As for as C-reactive protein (CRP) , as inflammatory markers; the result revealed seropositivity 26.66%, 30% and 100% in patients with DR ,NDR and control groups, respectively. The result of the present study indicated that the alternative pathway of complement activation linked to pathogenesis of retinopathy disease regardless the presence of diabetic and the type of diabetic; with role of CRP in disease complication.

KEYWORDS: Diabetic retinopathy, C3 and C4.