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GLYCATED ALBUMIN BUT NOT GLYCATED HAEMOGLOBIN IS ASSOCIATED TO FASTING PLASMA GLUCOSE IN PATIENTS WITH ADVANCED CHRONIC KIDNEY DISEASE AND ANAEMIA

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Background: Glycaemic homeostasis in diabetic chronic kidney disease (CKD) is usually monitored by HbA1c. Glyctaed albumin (GA) has recently suggested as a preferred glycemic marker in subjects with CKD with respect to HbA1c for its shorter half-life and its independence from the altered erythrocytes turnover. The aim of this study was to evaluate the relationship between GA and glycemic measures in subjects with advanced CKD (stage 3 to 5) in relation to anaemia.

Methods: Eighty-one subjects with eGFR<30 ml/min per 1.73 m2 were included in the study. Laboratory test results and to complete medical history were collected at the enrollment. GA was measured on plasma-EDTA by quantILab® Glycated Albumin (Instrumentation Laboratory, A Werfen Company).

Results: The study included 81 subjects, 46 (57%) males, 45 (55%) diabetics. HbA1c was correlated with Hb (r=0.39; p=0.0003), and no significant correlation was detected between plasma GA and serum albumin (p=0.82). A significant association between FPG and GA (r2= 0.41; p<0.0001), and between FPG and HbA1c (r2=0.42; p<0.0001) was detected in the whole study population. Patients with moderate/severe anaemia had lower HbA1c than patients with no anaemia, while both FPG and GA were comparable between the two groups. Multivariate regression analysis showed that GA was the strongest predictor of FPG in patients with moderate/severe anaemia while HbA1c didn't (r2=0.55; p<0.0001 for the model).

Conclusions: GA is significantly associated to FPG in patients with advanced CKD and anaemia and it can be considered an useful test to control glycaemic status in this setting.

Biography

Chiara Bellia is an Assistant Professor of Clinical Biochemistry at the University of Palermo. She has completed degree in Biology and Post-graduate in Clinical Biochemistry at the University of Palermo. Her experimental work has been focused on the clinical validation of new biomarkers in several conditions, including diabetes, neurodegeneration, endocrinopathies.

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