

# PREVALENCE OF MICROALBUMINURIA AND PREDICTIVE FACTORS IN A GROUP OF ALBANIAN DIABETIC ADULTS

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## Objectives:

Diabetic nephropathy is one of the most prevalent and dangerous chronic complication of diabetes mellitus. Its end-stage, renal chronic failure is the most important cause of premature death in diabetic patients. Microalbuminuria(MA), one of the first signs of Diabetic nephropathy, may be present from the moment of diagnosis in type 2 diabetes. The aim of our study was to determine the prevalence of microalbuminuria and to identify predictor factors in a group of albanian diabetic adult patients.

## Methods:

Diabetic patients selected randomly, assigned by hospital admissions in Tirana University Hospital Center, Durres and Fieri regional hospitals. Biochemical examinations, anthropometric measurements, and measurement of microalbuminuria by DCA 2000 in an urine spot, was performed. Microalbuminuria was considered positive if  $\geq 20$ mg or albumine/creatinine report  $\geq 25$ .

## Results:

- 321 patients participated in the study. 163 women (50.78%). Type 1 diabetes 19 patients (8.6%).
- The mean age  $58.21 \pm 11.87$  years. Mean diabetes duration  $8.19 \pm 6.96$
- Mean HbA1c  $8.2 \pm 2.1\%$ .
- Prevalence of MA 40.81%, while the overt diabetic nephropathy was present in 2.8% of cases.
- 9 / 27 patients (33.3%) with newly diagnosed diabetes presented already MA.

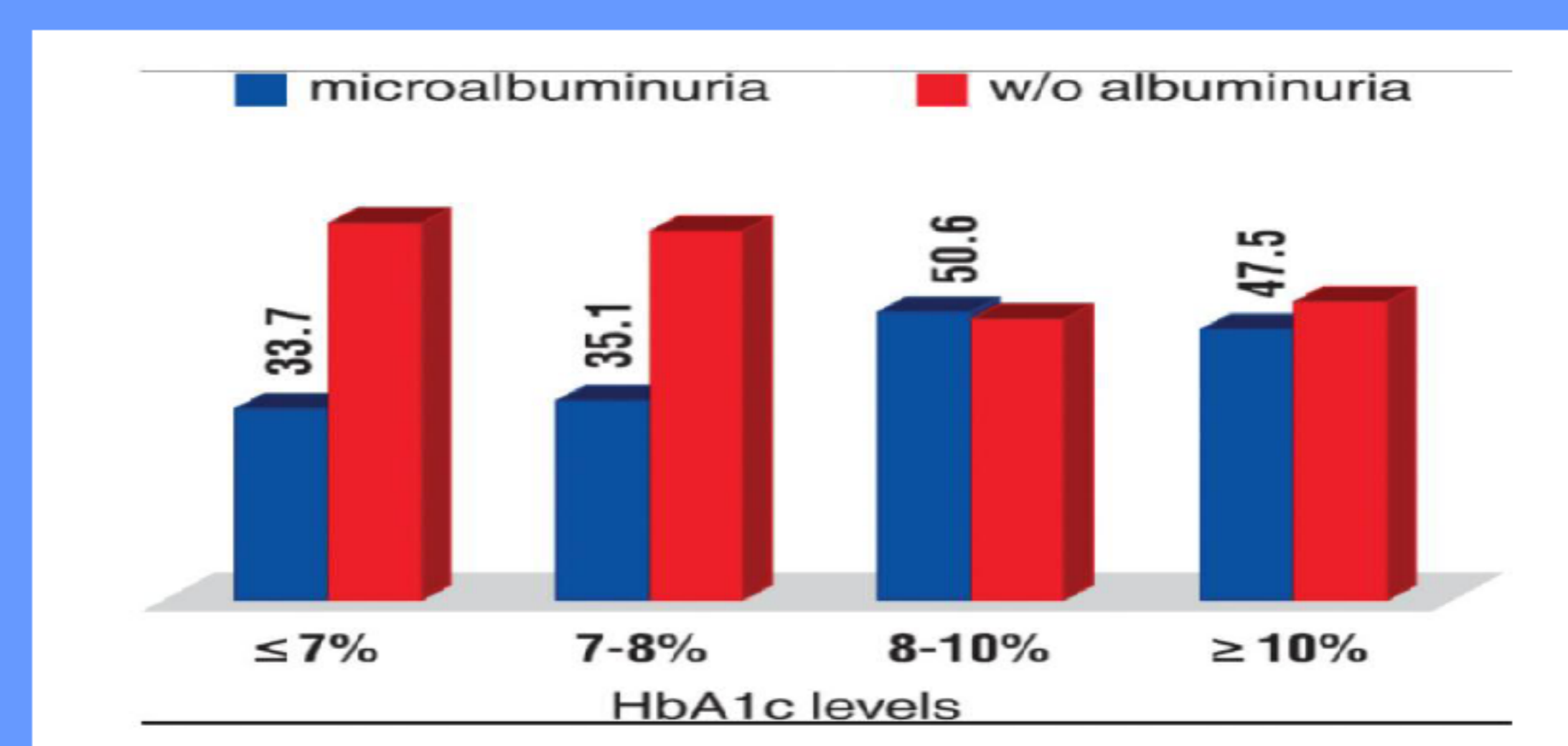
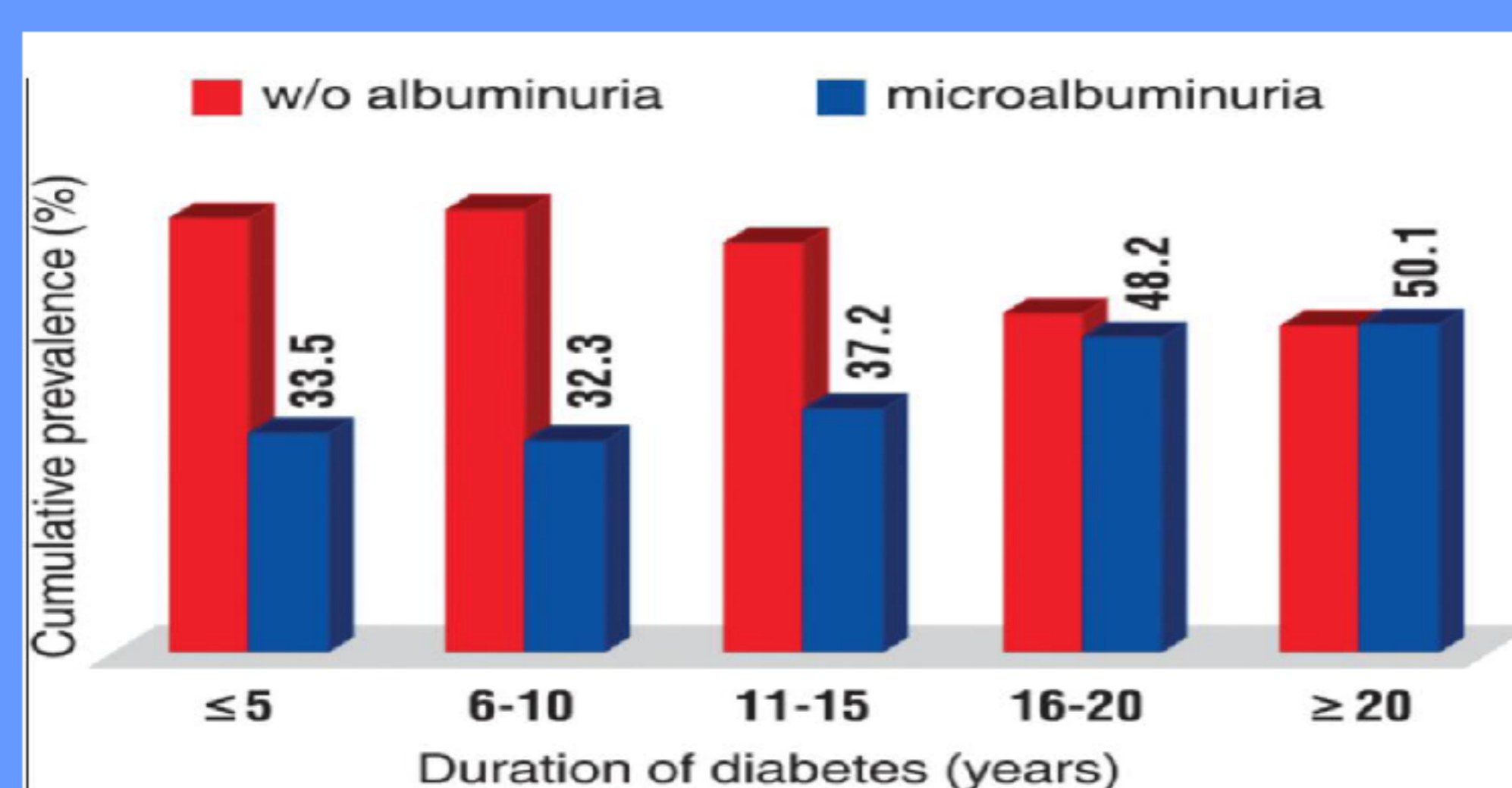


Table 1: Univariate analysis revealed that the risk factors associated with microalbuminuria were duration of diabetes, waist circumference in females, HbA1c and systolic blood pressure.

	Odds ratio	95% confidence interval	p-value
Gender	1.334	0.958-3.243	0.152
HbA1c	2.011	1.596-4.253	< 0.005
Waist circumference (male)	1.854	0.833-4.120	0.332
Waist circumference (female)	4.358	1.687-12.584	< 0.005
Cholesterol	1.450	0.858-2.246	0.323
Triglyceride	1.086	0.665-1.786	0.210
Smoking	0.856	0.568-1.956	0.041
Duration of diabetes	2.596	1.236-3.569	< 0.005
Systolic blood pressure	1.998	1.223-3.254	< 0.005
Diastolic blood pressure	1.235	0.847-2.547	0.210

Table 2: Multiple regression analysis using microalbuminuria as the dependent variable.

	Males		Females	
	Odds ratio	95% CI	Odds ratio	95% CI
HbA1c (8-10%)	1.254	0.951-2.567	4.512	1.452-13.985
Waist circumference	2.156	1.012-5.125	4.875	1.802-13.115
Duration of diabetes	2.785	1.156-3.759	2.568	1.702-3.778
Systolic blood pressure	2.889	1.852-6.854	1.023	0.858-2.568

CI: confidence interval, HbA1c: glycosylated hemoglobin.

## Conclusions:

Diabetic nephropathy is a common chronic complication of diabetes mellitus. Its early detection, and an aggressive treatment of different risk factors may prevent its progression. The search for the presence of MicroAlbuminuria might be part of the initial assessment for each person with type 2 diabetes.

