Physician connect

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Dear Doctor,

Greetings from Micro Labs Limited. We are happy to bring you 'Physician connect' which contains latest and interesting news in the field of Medicine.

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- Albuminuria and Its Influencing Factors: A Multicenter, Real-World Evidence Study
- Cross-Sectional Relationship between Carotid-Femoral Pulse Wave Velocity and Biomarkers in Vascular-Related Diseases
- Comparison of MAFLD and NAFLD diagnostic criteria in real world

Should you require any specific article or medical information, please feel free to contact us at medicalservices@microlabs.in

Looking forward to your valuable feedback

Best Regards,

Medical Team, Micro Labs Limited

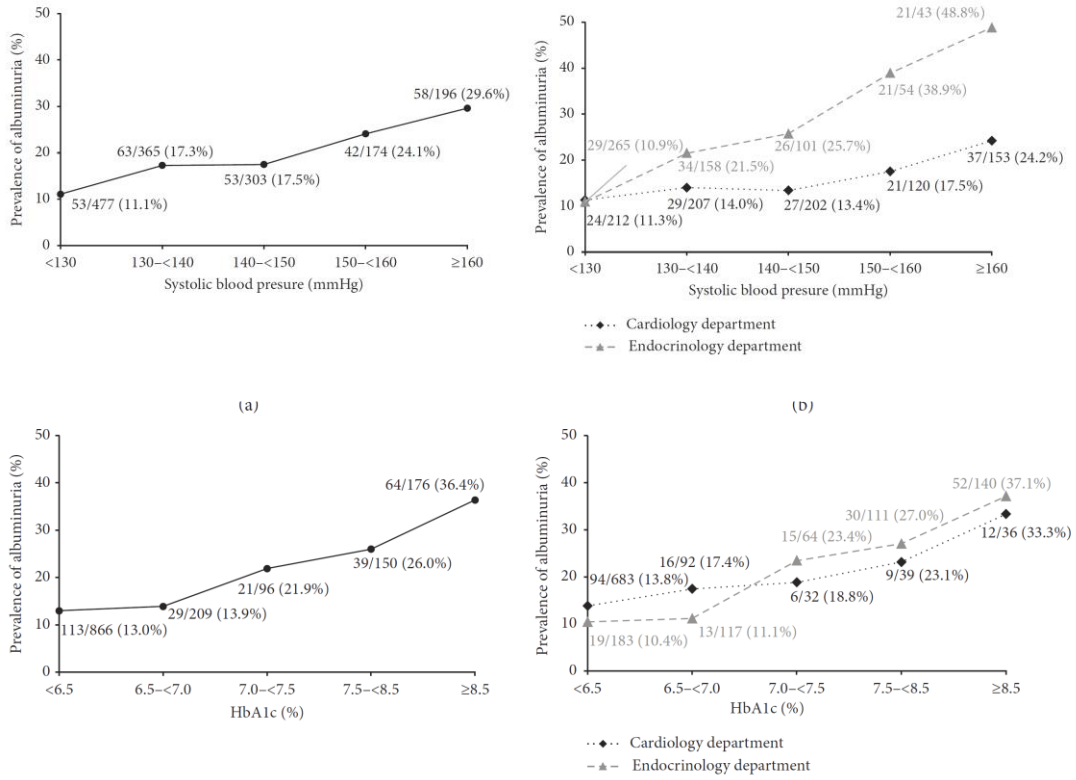
Albuminuria and Its Influencing Factors: A Multicenter, Real-World Evidence Study

Albuminuria, both microalbuminuria and microalbuminuria, are important indexes in clinical practice. First, in diabetes management, microalbuminuria is one of the earliest evidences of diabetic nephropathy. Besides, the treatment guidelines from the American Diabetes Association for the management of diabetes pointed out that albuminuria was also a risk factor for cardiovascular diseases in all patients with diabetes. Second, in hypertension management, it is demonstrated that microalbuminuria is also a prognostic marker for cardiovascular diseases, and for renal insufficiency, and all-cause mortality in patients with hypertension.

HbA1c and SBP were independent risk factors for albuminuria, and the relationship of BP and HbA1c with albuminuria is relatively continuous and graded.

This was an observational, cross-sectional, multicenter registry across China. Consecutive patients were registered with the Cardiology and Endocrine departments in 40 centers. The study was conducted to evaluate the prevalence of albuminuria and compare its risk factors in diabetic and hypertensive patients. Clinical characteristics were collected, and urinary albumin-to-creatinine ratio (UACR) was measured using the immunochemical method.

Of the 2510 patients enrolled in the study, 1515 underwent UACR testing and were included in the present analysis. The prevalence of microalbuminuria was 13.0% and 16.1% while that of macroalbuminuria was 2.5% and 5.0%, in the Cardiology and Endocrinology departments, respectively. HbA1c and systolic blood pressure (SBP) were independent risk factors for albuminuria. The relationship of blood pressure (BP) and HbA1c with albuminuria was continuous and graded. Compared with the reference level of SBP 130–139 mm Hg, an SBP level of <130 mmHg was significantly associated with a lower risk of albuminuria in all subjects (OR = 0.60; 95% CI: 0.40–0.89;) and in subjects with concomitant hypertension and diabetes (OR = 0.48; 95% CI: 0.25–0.92;). Nearly one-fifth of patients in the Cardiology and Endocrinology departments have albuminuria although ACEI/ARB were widely used. More effective therapy is needed in this population.



To conclude, nearly one-fifth of patients in the Cardiology and Endocrinology departments have albuminuria although ACEI/ARB were widely used. HbA1c and SBP were independent risk factors for albuminuria, and the relationship of BP and HbA1c with albuminuria is relatively continuous and graded. More effective therapy is needed in patients with albuminuria.

Source: Int J Hypertens. 2020. ID 1231593; 1-7. https://doi.org/10.1155/2020/1231593

Cross-Sectional Relationship between Carotid-Femoral Pulse Wave Velocity and Biomarkers in Vascular-Related Diseases

Coronary heart disease (CHD), hypertension, and diabetes mellitus (DM) are the most serious vascular-related diseases threatening the human's life. Arteriosclerosis is the basic pathophysiological change of these diseases, and it can be measured by arterial stiffness. A recent study showed that arterial stiffness is a strong predictor of future cardiovascular events and all-cause mortality. The present study was done to investigate the relationship between

CFPWV was significantly higher in subjects with hypertension, CHD, and DM

carotid-femoral pulse wave velocity (CFPWV) and biomarkers such as homocysteine (Hcy), N-terminal pro-brain natriuretic peptide (NT-proBNP), and urine albumin (microalbumin) (UAE) in vascular-related diseases.

656 subjects were enrolled into our study. +ere were 377 patients with hypertension, 231 with coronary heart disease, 154 with diabetes mellitus, and 186 healthy subjects. They were divided into four groups according to the number of suffered diseases: group 1 had only one of three diseases, group 2 had two, and group 3 had all of three diseases. CFPWV was measured by Complior apparatus.

CFPWV was significantly higher in group 3 than in the healthy group, group 1, and group 2 (12.71 ± 2.38 vs 10.11 ± 2.28, 10.70 ± 2.12, and 11.92 ± 2.55, all P<0.005).

The level of Hcy was significantly higher in group1, group 2, and group 3 than in healthy subjects, respectively. Levels of Log NT-proBNP and Log UAE were significantly higher in group 3 than in group 1 (2.27 ± 0.4 vs 2.10 ± 0.4, 1.00 ± 0.65 vs 0.68 ± 0.56, both P<0.005). Positive correlation between CFWV and Hcy, Log UAE, and Log NT-proBNP was found in the entire study group (r = 0.109, 0.196, and 0.119, all P<0.005). Multivariate analysis showed that pulse pressure, age, fasting plasma glucose, diastolic blood pressure, body mass index, and Log UAE were independent associating factors of CFPWV in all subjects.

	Unstandardized β	95% CI for β	Std. error	Standardized β	t	p value
Constant	1.786	(−0.681, 4.253)	1.254	—	1.424	
Pulse pressure	0.057	(0.041, 0.074)	0.008	0.334	6.930	<0.001
Age	0.074	(0.053, 0.094)	0.010	0.333	7.107	<0.001
FPG	0.188	(0.060, 0.315)	0.065	0.126	2.899	0.004
DBP	0.032	(0.011, 0.053)	0.011	0.137	2.996	0.003
BMI	−0.104	(−0.168, −0.039)	0.033	−0.142	−3.152	0.002
Log UAE	0.491	(0.046, 0.936)	0.226	0.098	2.170	0.031

Multiple linear regression analysis for the relationship between CFPWV and study variables among the entire study group, independent associating factors of CFPWV in all subjects

CFPWV was significantly higher in subjects with hypertension, CHD, and DM. There was correlation between CFPWV and biomarkers such as NT-proBNP, Hcy, and urine albumin (microalbumin).

Source: Int J Hypertens. 2020, Article ID 6578731, 8 pages. https://doi.org/10.1155/2020/6578731

Comparison of MAFLD and NAFLD diagnostic criteria in real world

Fatty liver disease (FLD) is prevalent worldwide with the estimated prevalence of 25%. Due to the insidious onset and prolonged course, the patient pool is continuously increasing. Metabolic associated fatty liver disease (MAFLD) is a

novel concept proposed in 2020, the utility of which has not been tested and validated in real world. We aimed to compare the characteristics of MAFLD and non-alcoholic fatty liver disease (NAFLD). The data were retrieved from the third National Health and Nutrition Examination Surveys of the United States, which is an unbiased survey dataset and frequently used for the study of fatty liver disease.

A total of 13,083 cases with completed ultrasonography and laboratory data were identified from the NHANES III database. MAFLD was diagnosed in 3885/13083 (29.70%) participants, while NAFLD in 4347/13083 (33.23%) amongst the overall population and 4347/12045 (36.09%) in patients without alcohol intake and other liver diseases. Compared with NAFLD, MAFLD patients were significantly older, had higher BMI level, higher proportions of metabolic comorbidities (diabetes, hypertension), and higher HOMA-IR, lipid and liver enzymes. MAFLD patients with alcohol consumption were younger than those without, and more likely to be male. They had less metabolic disorder but higher liver enzymes. There were more cases with advance fibrosis in MAFLD patients with alcohol consumption. MAFLD definition is more practical for identifying patients with fatty liver disease with high risk of disease progression.

MAFLD patients with alcohol consumption had less metabolic disorder but more severe liver injury.

Although the diagnostic criteria of MAFLD do not require ruling out other liver diseases, unexpectedly, it detects similar numbers of cases as NAFLD definition (both were 30% in overall population). Compared with NAFLD, MAFLD patients were significantly older, had higher BMI level, Higher proportions of metabolic comorbidities (diabetes, hypertension), and higher HOMA-IR levels and lipid levels, as well as liver enzymes, indicating that MAFLD criteria can discriminate patients at risk more effectively. MAFLD patients with alcohol consumption had less metabolic disorder but more severe liver injury. MAFLD criteria casts a wider approach, it gives physicians and patients the opportunity to treat patients holistically rather than focusing on individual organ systems.

Source: Lin Su et al. Liver Int.. 2020 Jun 1. doi: 10.1111/liv.14548. Online ahead of print.