

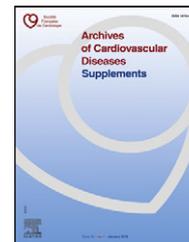


Available online at

ScienceDirect
www.sciencedirect.com

Elsevier Masson France

EM|consulte
www.em-consulte.com/en



09 - Kidney

Higher 24-hour urine Na/K and albumin-to-creatinine ratio are subclinical organ damage markers in hypertensive patients from Blida (Algeria)



A. Bachir Cherif^{1,*}, S. Bennouar¹, A. Bouamra¹, A. Louafi¹, M. Temmar², M. Bouafia¹

¹ Clinic of Internal Medicine and Cardiology, University Hospital Center of Blida, 09000 Blida, Algeria

² Cardiology and Angiology Center, Gharadaia 47000, Algeria

* Corresponding author.

E-mail address: ghani11bc@yahoo.fr (A. Bachir Cherif)

Purpose The aim of this study was to evaluate the relationship between ACR (albumin-to-creatinine ratio) and markers of TOD (target organ damage) in treated hypertensive patients.

Methods We enrolled 859 consecutive essential hypertensives (mean age 55 ± 10 years, 444 females) without known cardiovascular disease (CVD). LVMI was assessed by echocardiography by using the Devereux formula. eGFR was calculated by the MDRD equation. In a 24-hour urine collection, sodium/potassium ratio and ACR were measured. Valid 24-h ambulatory BP monitoring were analyzed. Participants were grouped in 4 groups: normotensives, isolated daytime hypertensives (IDHT), isolated nocturnal hypertensives (INHT), and both-hypertensives having both daytime and nocturnal hypertension.

Results The 24-hour urine sodium (24HUNa) was 151.7 ± 71.4, 158.4 ± 69.3, 168.7 ± 68.8 and 177.1 ± 70.7 mmol/24 hour, respectively. The 24-hour urine potassium (24HUK) was 52.4 ± 17.8, 54.1 ± 16.2, 59.8 ± 20.7 and 62.1 ± 20.4 mmol/24 hour and the 24-hour urine sodium/potassium ratio (24HUNa/24HUK) were 3.1 ± 2.2, 3.3 ± 1.5, 3.2 ± 2.7 and 3.0 ± 2.3 respectively. Compared to NT group, INHT had higher 24HUNa ($P=0.01$), and both-HT had higher 24HUNa and 24HUNa/24HUK ($P<0.01$ and 0.01, respectively). There was no difference in 24HUNa, 24HUK and 24HUNa/24HUK between INHT and both-HT. In multivariate analysis controlled with age, gender, body mass index, estimated glomerular filtration rate, INHT showed significantly higher 24HUNa/24HUK than NT ($P<0.02$). ACR exhibited significant association with LVMI ($r=0.312$, $P=0.01$) and eGFR ($r=-0.122$, $P=0.01$). In additional analysis, ACR was associated with TOD and decreased renal function (eGFR < 60 ml/min). Specifically, ACR exhibited a significant association with the number of TOD and this association was independent of age and gender ($P<0.01$).

Conclusions The results of present study suggest that high ratio of sodium/potassium may be a risk of isolated nocturnal hypertension and both-hypertension. Our findings support the close relationship

between ACR and TOD in hypertension, as well as, the predictive value of ACR as a predictive of TOD.

Disclosure of interest The authors declare that they have no competing interest.

<https://doi.org/10.1016/j.acvdsp.2019.05.081>

Cardiac complications in children with chronic renal: Prevalence of risk factors



Djamila-Djahida Batouche^{a,*}, Kheireddine Kerboua^b, Nadia-Faiza benatta^a, Samia Benouaz^c, Rabia Okbani^d, Wahiba Berrachdi^a, Miloud Lahmer^e, Lynda Sadaoui^a, Fadela Benhamed^a, Z. Mentouri^a

^a Faculté de médecine, Oran, Algeria

^b Laboratoire d'Immunologie, Faculté de Médecine, Ouargla, Algeria

^c Faculté de médecine SBA, Algeria

^d Université Ahmed Benbella 2, Oran, Algeria

^e CRASC, Oran, Algeria

* Corresponding author.

E-mail address: khedidjabatouche@yahoo.fr (D.-D. Batouche)

Objectives Cardiovascular complications are the leading cause of death and morbidity in chronic hemodialysis patients. The purpose of this study was to identify the factors associated with major cardiovascular events in hemodialysis children.

Methods Bi-centric study was carried out during in 2016 into two hemodialysis departments. We included hemodialysis children for more than one year.

Results Fifty-two patients were included, sex ratio M/F: 1.3, average age: 10.7 years-old (3–16). The dialysis duration was 72.5 ± 1.6 months. Cardiac risk factors were evaluated: the hemoglobin blood concentration was < 10 g/dl in 31 patients; 6 children had hemoglobin level < 7 g/dl. Diastolic systolic hypertension was noted in 65% of patients, 5% of children presented HT grade 3, and 41.95% of patients had arteriovenous fistulas.

Clinical and biological secondary hyperparathyroidism was diagnosed in 21.06% of patients.

An acute pulmonary edema (APO) occurred in 45% of patients and pericarditis in 10%. Overall heart failure (1.20%), and arrhythmias (11.90%) were also retrieved.

Echocardiography allowed to identify 21% of patients with pulmonary arterial hypertension (PAH); 86% of patients evidenced left ventricular hypertrophy and 50% a dilation of the left ventricle. PAH and LV dilatation were the most frequent morphological abnormalities. Posterior pericardial detachment was found in a proportion of 11.04%. Mitral and tricuspid valves abnormalities were noted in 31