

## Evolution of the cardiovascular profile after renal transplantation in type 1 diabetic



M. Malki Abidi\*, L. Ben Fatma, S. Damoué, I. Mami, H. Jebali, W. Smaoui, M. Krid, S. Beji, L. Raies, K. Zouaghi  
Nephrology Department, La Rabta Hospital, Tunis, Tunisia  
\* Corresponding author.

E-mail address: [mouna.malkiabidi@gmail.com](mailto:mouna.malkiabidi@gmail.com) (M. Malki Abidi)

**Introduction** Renal transplantation is the best treatment for end-stage renal disease (ESRD). Diabetes and chronic kidney disease (CKD) are major cardiovascular (CV) risk factors. Our study focuses on the initial CV profile and its evolution after renal transplantation (RT) in type 1 diabetes (DT1) patients.

**Methods** This is a retrospective study of 4 DT1 patients who benefited from a renal transplantation over the period from 2010 to 2017.

**Results** In our series of 74 patients receiving a kidney from a living donor, 4 patients (5.4%) had DT 1. Our study concerned these 4 patients: 3 men and 1 woman, mean age: 36.25 years [30–43]. The average duration of diabetes was 25.25 years [13–33]. All patients were hypertensive, one had dyslipidemia and none of them was overweight. Diabetic nephropathy was the cause of end-stage renal failure in all 4 cases and patients were treated with kidney replacement therapy for 2 years (hemodialysis in 2 cases and peritoneal dialysis in 2 cases). Prior to RT, all patients had normal echocardiography and stress testing, 2 patients underwent myocardial scintigraphy without abnormality. None of the patients had coronary angiography. Doppler ultrasonography of the iliac and aortic axes was normal in 1 case, atheromatous infiltration was noticed in 2 patients, and distal mediocalcosis with tight stenosis of both tibial axes was discovered in one case. All patients underwent immunosuppressive therapy with corticosteroids, ciclosporine and mycophenolate mofetil, and followed for an average of 3.25 years. The post RT evolution was marked by an immediate resumption of graft function. Echocardiography control was normal for all 4 patients. One patient presented 2 years later a gangrene of the foot that had been treated by angioplasty of the left superficial femoral artery and amputation of one toe.

**Conclusion** In DT1 patients, renal transplantation is the best treatment for ESRD despite the use of corticosteroids and anticalcineurins. However, prior explorations of good cardiac function and adequate vascular compliance are essential to reduce the risk of CV.

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## Masked hypertension during prehypertension and anthropometric indices: Prospective study



A. Mammeri\*, R. Guermaz, F. Kessal, S. Taharboucht, F. Hamrou, A. Hatri, M. Ammi, N. Ait Said, S. Zekri, M. Brouri, A. Tebaibia

Department of Internal Medicine, El Biar hospital, Algiers, Algeria  
\* Corresponding author.

E-mail address: [amel.mammeri@yahoo.fr](mailto:amel.mammeri@yahoo.fr) (A. Mammeri)

**Background** Analysis of the ambulatory blood pressure profile of patients with prehypertension (PHT) and the assessment of their cardiovascular risk have rarely been studied. Our work aimed to establish the link between masked hypertension (MH) and the cardiovascular risk factors (CVR) associated with prehypertension.

**Method** From 2015 to 2016, a cross-sectional study was conducted in primary care consultation in Algiers on a sample of 1086 adults, without known hypertension. They were screened for PHT (defined by the JNCVII as systolic BP between 120 and 139 mmHg or diastolic BP between 80 and 89 mm Hg). Pre-hypertensive patients

were assessed for their anthropometric indices (height, weight and waist circumference) and an ambulatory blood pressure measurement (ABPM). The Pearson correlation test was used to investigate the relationship between MH and the major CVR factors in these patients.

**Results** Three hundred and ninety-nine pre-hypertensive patients were identified (prevalence: 36.7%), concerning more men than women (50.0 vs. 31.5%,  $P < 0.001$ ). ABPM was performed in 273 patients, and MH was treated in 52.4% of cases, affecting men and women equally ( $P = 0.29$ ). Nighttime MH ( $\geq 120/70$  mmHg) was significantly more frequent than daytime MH ( $\geq 135/85$  mmHg) (57% vs. 36%,  $P = 0.0005$ ). Patients with MH were older than those with normal ABPM ( $46 \pm 13.33$  vs.  $42 \pm 14.36$  years,  $P = 0.01$ ), had higher body mass index (BMI) ( $29.47 \pm 5.507$  vs.  $26.6 \pm 4.985$  kg/m<sup>2</sup>,  $P = 0.00001$ ) and more frequent android obesity (64% vs. 43%,  $P = 0.0006$ ). In MH patients, we found a positive correlation between daytime pressure and weight ( $r = 0.361$ ), BMI ( $r = 0.283$ ) and waist circumference ( $r = 0.374$ ). This positive relationship was also valid for the night pressure values ( $r = 0.379$ ,  $0.399$  and  $0.410$  respectively).

**Conclusion** Masked hypertension is a recognized source of increased CVR, thus we suggest to record and monitor the ambulatory pressure in pre-hypertensive subjects, especially as they are overweight.

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

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## Peripheral arterial disease of the lower limbs in Moroccan hypertensive non-diabetic patients



M. Mouadili\*, C. Mbauchy, D. Benzeroual, S. Karimi, M. El Hattatou

Cardiology and Vascular Diseases, Mohammed the VIth University Hospital Center, Marrakesh, Morocco

\* Corresponding author.

E-mail address: [maryam.mouadili@gmail.com](mailto:maryam.mouadili@gmail.com) (M. Mouadili)

**Background** Peripheral arterial disease (PAD) of the lower limbs is only an aspect of a general vascular disease; PAD announces cardiovascular accidents. Thus, the early screening of PAD is a major issue.

**Purpose** To evaluate the prevalence of PAD of the lower limbs in asymptomatic patients with hypertension and to determine the risk factors or associations of risk factors most frequently responsible of pathological ( $< 0.9$ ) ankle-brachial index (ABI).

**Methods** We conducted a prospective survey including 273 patients from November 2016 to December 2017 in our department.

**Results** The mean population's age was 62.09 years (27–88 years), with a male predominance gender (67,76%). The prevalence of PAD was 28.94%. Risk factors or association of risk factors that were significantly associated with PAD (Chi<sup>2</sup> Pearson test) were: the male gender (72%), tobacco use (56%), obesity (BMI  $\geq 30$ ) 15.8%, dyslipidemia and grade-3 hypertension (23.4%).

**Discussion and Conclusion** PAD of the lower limbs is a particular location of the atheromatous process as well as a marker of its diffusion. As a result of this study, we recommend the screening of asymptomatic PAD in all hypertensive patients by measuring the ankle-brachial index.

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

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## Non-occlusive lower limbs arteriopathy in hypertensive type 2 diabetes: Should we get interested?

