

Using unvaried analysis, these complications were significantly correlated with HT with  $P=0,013$  and  $0,011$  respectively. Retinopathy was found in 40% of hypertensive diabetics vs. 24% in normotensive diabetics. Nephropathy was found in 13% of hypertensive diabetics vs. 3% in normotensive diabetics.

**Conclusion** Our study confirms the association between diabetes and HT. We observed a high prevalence of HT in our diabetic population increasing with age and duration of diabetes. High risk of degenerative complications requires intensive management of HT in diabetic patients.

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

<https://doi.org/10.1016/j.acvdsp.2019.05.039>

## Risk of stress and burnout in medical students: Cross-sectional study in Constantine - January 2018

Nadir Boussouf<sup>1,2,3</sup>

<sup>1</sup> Faculty of Medicine, Constantine University 3, Algeria

<sup>2</sup> Head of Department of Epidemiology and Preventive Medicine, CHU Constantine, Algeria

<sup>3</sup> Head of Continuing Education, Faculty of Medicine, Constantine University 3, Algeria

E-mail address: [nboussouf@gmail.com](mailto:nboussouf@gmail.com), [nadir.boussouf@univ-constantine3.dz](mailto:nadir.boussouf@univ-constantine3.dz)

**Objective** To evaluate the stress and the Burnout syndrome among the students of the faculty of medicine at the university Salah Boubnider Constantine 3.

**Method** In January 2018, a cross-sectional survey was conducted among students at the Faculty of Medicine of Constantine. A voluntary, anonymous self-questionnaire collected information on age, sex, weekly working time at home, level of perceived stress (Cohen score/40), and burn-out syndrome. (Scale MBI: Maslach Burnout Inventory). The MBI explores 3 scores, namely exhaustion (9 Questions/54), depersonalization (5Q/30) and personal accomplishment (8Q/48).

**Results** 253 students were included, 114 external, 93 internal and 46 residents. The mean age was 24.9 years (SD=1.8), the sex ratio H: F was 0.16. The average duration of work at home was 17.6 hours/week (SD=15, 2) the equivalent of 4.5 days/week (SD=1.9). The average stress score was 19.0 (SD=6.1), mean MBI scores were for exhaustion of 29.0 (SD=10.1), depersonalization of 9.6 (SD=6.2) and the achievement of 31.7 (SD=7.9). A total of 43.48% of students reported high stress (Cohen score > 24), 44.6% reported high burnout (exhaustion score > 38 and depersonalization score > 16). The correlation coefficient Perceived Stress Scale Scoring and Burn-Out Syndrome was  $r^2 = 0.25$  ( $P < 10^{-6}$ ).

**Conclusion** The stress and burnout risks are a growing reality for students. Reducing the impact of these risks on academic performance and academic health is a challenge for health authorities. The implementation of a policy of prevention, of health education adjusted to the risk detected through the PSSS and MBI scores, as well as a screening and care specific to the student population became a state duty to anticipate the exposure and decrease the prospective morbid burden.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

<https://doi.org/10.1016/j.acvdsp.2019.05.040>



## Prevalence of cardiovascular complications in hemodialysis patients; a multicenter study

B. Bouterfas

CHU Sidi Bel Abbes, Sidi Bel Abbes, Algeria

E-mail address: [asmaa.bouterfas@gmail.com](mailto:asmaa.bouterfas@gmail.com)

**Objectives** Heart disease is particularly common in chronic hemodialysis patients, worsening the prognosis for this population. Left ventricular hypertrophy and coronary artery disease are the most common cardiac abnormalities. The purpose of our work was to determine the prevalence of cardiovascular complications in patients with extra-renal purification and to identify the main cardiovascular risk factors in this population.

**Methods** For this retrospective multicenter study of descriptive type we recruited chronic hemodialysis patients treated in the Sidi Bel Abbes University Hospital Center and in three private centers in the same city. Cardiovascular explorations with face chest X-ray, electrocardiogram and cardiac ultrasound echocardiography. Biological parameters and regular monitoring of the progressive aspects of cardiac complications were collected for each patient.

**Results** Five hundred and twenty-seven patients were included from January 2014 to December 2017. The mean age was 57 years  $\pm$  13.85 and the sex ratio men/women=1.4. All patients had arteriovenous fistula. The prevalence of cardiovascular complications in our series was 66%, mainly left ventricular hypertrophy: 63%, arterial hypertension (HT): 54%, acute coronary syndrome: 15%, hemorrhagic stroke: 4%, arterial occlusive disease of the lower limbs: 12%, vascular calcification 5% of cases.

**Conclusion** The prevalence of cardiovascular diseases in chronic hemodialysis patients is very high. Their prevention requires a good control of the main risk factors, namely hypertension and anemia. Regularly performing echocardiograms would allow early detection so that optimal treatment can be provided.

**Disclosure of interest** The authors have not supplied their declaration of competing interest.

<https://doi.org/10.1016/j.acvdsp.2019.05.041>

## Unhealthy behavior and risk of uncontrolled hypertension among treated individuals—The CONSTANCES cohort study

Michele Cherfane<sup>1</sup>, Alexandre Vallee<sup>2,3</sup>, Sofiane Kab<sup>2,4</sup>, Marie Zins<sup>2,4</sup>, Jacques Blacher<sup>1,2,3,\*</sup>

<sup>1</sup> Nutritional epidemiology research unit (EREN), Inserm U115, INRA U1125, CNAM, Paris 13 university, Bobigny, France

<sup>2</sup> Faculty of medicine, Paris-Descartes University, Paris, France

<sup>3</sup> Diagnosis and Therapeutic center, hypertension and cardiovascular prevention unit, Hôtel-Dieu hospital; AP-HP, Paris, France

<sup>4</sup> Inserm, UMS011 Population-based Epidemiological Cohorts Unit, Villejuif, France

\* Corresponding author.

E-mail address: [jacques.blacher@aphp.fr](mailto:jacques.blacher@aphp.fr) (J. Blacher)

**Background** Poor lifestyle behaviors have been identified to contribute to poor blood pressure (BP) control.

**Purpose** We aimed to examine the individual and combined associations of unhealthy behavior with uncontrolled hypertension (HTN) among treated hypertensive adults.

**Methods** We conducted cross-sectional analysis using data from the CONSTANCES cohort study. Volunteer participants who have been diagnosed with HTN and were taking antihypertensive medications were included. Uncontrolled BP was defined as mean systolic BP  $\geq$  140 mmHg and/or mean diastolic BP  $\geq$  90 mmHg. Lifestyle factors were assessed using validated questionnaires. Dietary adherence assessment was done using the modified National Program on Nutrition and Health (mPNNS) score and then categorized into low,

