

Results Our results show that after 90 days of experimentation, the ACV supplementation leads to a highly significant ($P \leq 0.001$) decrease in BMI in rats submitted to cafeteria-diet (0.56 ± 0.01 vs. 0.82 ± 0.02). This is concomitant with a highly significant decrease ($P \leq 0.001$) in Firmicutes (Enterobacteriaceae and Clostridium) level both at the colon and feces. These results testify to the effect of the ACV on the Firmicutes/Bacteroidetes ratio.

Conclusion In conclusion, our results indicate that administration of ACV for 12 weeks can modulate of body weight and gut microbiota in rats subjected to cafeteria-diet. This work can be a successful strategy for weight loss and obesity prevention.

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

<https://doi.org/10.1016/j.acvdsp.2019.05.102>

Therapeutic education of the renal transplant patient



L. Kara-Hadj Safi^{1,*}, M. Kasmi², M. Benmansour¹

¹ Nephrology Department, University Hospital Tlemcen, Tlemcen, Algeria

² Pharmacy Department, University Abou Bekr Belkaid, Tlemcen, Algeria

* Corresponding author.

E-mail address: kara.lamia@yahoo.fr (L.K.-H. Safi)

Introduction The success of kidney transplantation depends on the long-term immune-suppressive treatment; therapeutic education programs for transplant recipients are being implemented world-wide to help patients acquiring the needed skill to manage their treatment and lifestyle in the best possible way.

Objectives (1) To assess knowledge and observance of transplant patients receiving immunosuppressive treatments, and (2) to develop information, monitoring tools and matrices of therapeutic education program (ETP) adapted to our patients.

Patients and methods Our cross-sectional study was conducted in 100 kidney transplant patients followed in our department; age: 34 ± 10.8 years old; sex ratio: 1.76. Observance was assessed by the Girerd's questionnaire and knowledge of their medical status by a questionnaire consisting of 12 items.

Results Eight % of patients did not respect their medical appointment dates. 25% had a good knowledge of their immunosuppressive treatment. The risk of not taking the immune-suppressant were well-known (more than 80% of correct answers), other notions concerning the mechanisms of action and the possible side effects were much less understood. The knowledge of the risks of treatment, lifestyle and diet was incomplete. The item evaluating what to do if the patient forgets to take a medication received the lowest percentage (5%) of correct answer. This level was significantly correlated with the educational level ($P = 0.02$). Forty four percent of our patients were considered as good observers and 51% had minor observance problems. Irregularity in the time of intake appeared to be the main factor in patients' poor compliance. No relation was evidenced between the level of knowledge of the patients and their level of observance.

Discussion and conclusion Our study revealed that our patients' knowledge was fragmented and insufficient, likely limiting the observance and increasing the risk of kidney rejection. In order to improve this situation, we adapted the ETP methods to our patients' pathology and established 4 educational tools: an information booklet on kidney transplantation, brochures on drug interactions, explanatory images and interactive maps. We organized information meetings to sensitize patients. This educational program has been appreciated by patients. A future evaluation of its impact on knowledge and observance is required. This ETP implemented in our service represents a considerable step forward in the management of kidney transplant patients. However, a well-structured program,

led by a multidisciplinary team, must be implemented for ensuring the effectiveness and safety of treatment.

Disclosure of interest The author declares that they have no competing interest.

<https://doi.org/10.1016/j.acvdsp.2019.05.103>

Low carbohydrate caloric restriction diet prevents non alcoholic fatty liver disease development, improves pro/antioxidant status and nitric oxide bioavailability in obese rat



Sabrine Louala, Aicha Benyahia-Mostefaoui, Myriem Lamri-Senhadji*

Laboratoire de Nutrition Clinique et Métabolique (LNCM), Faculté des Sciences de la Nature et de la Vie, Université Oran 1 Ahmed Ben Bella, Oran, Algérie

* Corresponding author.

E-mail address: mylamri@hotmail.fr (M. Lamri-Senhadji)

Background One of the pathogenic mechanisms of the non-alcoholic fatty liver disease (NAFLD) is the accumulation of reactive oxygen species, which in turn aggravates the disease progress and increase cardiovascular disease (CVD) risk. Caloric restriction is recommended for improvement of obesity related diseases such as NAFLD. However, low carbohydrate caloric restriction (LCCR) diet effects on liver metabolic dysfunction and CV complications associated remain unknown.

Purpose The effects of LCCR diet on dyslipidemia, hepatic fat accumulation, pro/antioxidant status and endothelial dysfunction were studied in obese rat.

Methods Nutritional obesity was induced since weaning by a hyperlipidic diet (HLD) for 10 weeks. Responders rats to HLD were divided into two obese groups. The first group fed LCCR diet and the second, continue to consume the HLD for 4 weeks (obese control (Ob-C)). A normoponderal group was fed a standard diet, and used as control (C group).

Results In LCCR group, a reduction of liver fats accumulation and low-density lipoproteins-cholesterol (C) content was noted compared with Ob-C group, whereas, high-density lipoproteins-C was increased. In addition, the concentrations of thiobarbituric acid reactive substances, lipids hydroperoxides, isoprostans and carbonyls in serum and tissues (liver aorta and heart) were decreased and enzymatic antioxidant defense enhanced, including paraoxonase 1 activity. In addition, an improvement in the bioavailability of nitric oxide in serum and tissues, and in the membrane fluidity was also observed.

Conclusion LCCR diet prevents NAFLD development; improves pro/antioxidant status and the endothelial dysfunction. LCCR diet may be a promising therapeutic strategy to slow down the development of cardiometabolic complications associated with NAFLD.

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

<https://doi.org/10.1016/j.acvdsp.2019.05.104>

The self-assertiveness sentiment of hypertensive patients



R. Okbani^{a,*}, D.D. Batouche^b, M. Lahmer^c, N. Benatta^b

^a CHU Oran, University Oran2, Algeria

^b Medecal School, Oran, Algeria

^c Centre de recherche en anthropologie sociale et culturelle (CRASC), Algeria

* Corresponding author.

E-mail address: miyousoran@yahoo.fr (R. Okbani)

Introduction Chronic disease usually imposes psychological constraints to patients as much as physical damage. This mental