Prevention of kidney disease: Is it a reachable chimera?

Prevención renal: ¿Una quimera alcanzable?

According to epigenetic, all human beings, develop from conception to birth, a genetic burden that marks us with a predisposition to certain diseases and conditions at the time of birth. The two most important ones are the generation of Chronic Kidney Disease (CKD) such as arterial hypertension (HTA), and Diabetes Mellitus (DM). The environment in which we grow up, hostile or guarded, will contribute to the development of these genes as risky factors, which, if they are not detected and corrected on time, can be expressed as a permanent injury in a target organ, a fact which is considered as a disease.

The kidney is not the exception; in some cases, the existence of social problems influence maternal nutrition, or placental changes. In other situations, they make the neonate present alterations in number, size and function of its glomeruli, which will generate HTA and have a predisposition to ERC, according to Brenner, Anderson and our dear colleague Diego Garcia(1).

As we grow up, genetics coupled with a non-protected environment with unhealthy lifestyles, habits of smoking, sedentarism and an inadequate diet, make possible the process of development of the discussed Metabolic Syndrome, whose components, especially product of the accumulation of abdominal fat and obesity are part of two of the major precursors of the CRD: DM and HTA. In addition, a study conducted by Luis Castillo, Gustavo Aroca , Clinica de la Costa and Universidad Simon Bolivar2, showed as a result that obesity, unlike the abdominal perimeter, was correlated with the development and the advancement of CRD.

Both HTA and the DM show a dominant and increasing state for a long period of ten years, which in most of the cases do not show clinical symptoms, prevents an early diagnosis and an advancement of the disease. There are other pathologies such as the glomerulus, auto-immune diseases, anatomic abnormalities and polycystic kidneys which in many cases may not show up as clinical symptoms or produce symptoms that are unnoticed at the primary care level, which may generate serious kidney problems in subsequent years. However, I will focus on the main prevalent pathologies in Colombia, according to the report of the Cuenta de Alto Costo (CAC), 2015.

Nicholas Machiavelli, in 15133, was a visionary man of the problems that we might face today, as he wrote: “At the beginning, a disease is easy to cure, and difficult to diagnose, but as time passes, not having been treated or recognized, it becomes easy to diagnose, but very difficult to treat.” To this thought, can add that not only is it difficult to treat, but also a very high cost for our national health systems.

The ACC, in its 2015 (4) report, presents us an improvement for some people but it is a concern for others. In that year, thanks to most of the HTA and DM2 active detection, 256 888 new ERC cases were diagnosed in different conditions.

Correspondencia: Dr. Álvaro Mercado Juri, mercado.alvaro@gmail.com

But analyzing the global vision of CRD in Colombia, we found troubling data : a total of 3,334,725 patients diagnosed with HTA, DM2 or both, 24% (881 185) do not present any kind of renal lesion; 5% (172 445) are in stage 1, 8% (272 222) In stage 2, 13% (441 160) In stage 3, another 2% (47 885) In stage 4 and 1 per cent (28 589) In stage 5. Of these last cases, 4560 correspond to renal aging. Concerned about the numbers of patients in stages 3, 4 and 5, who are around 517 634 patients, which, according to the same ACC monitoring report, have a median deterioration of their glomerular filtration rate (GFR), until you get to stage 5, corresponding to 4 years and 85 days. But even more worrying is the fact that 1 561 269 patients (47%), with the precursor pathologies mentioned above have not been studied for CRE as is required by the standard. This is the tip of the iceberg that is most concerning and it has a relationship with other important data such as income to renal replacement therapy (RRT), of which only 30% is programmed. There is 31% of cases which have not been registered and 39% who arrive as dialysis urgency , raising so exorbitant costs and the mortality of the Terminal Chronic Renal Disease (TCRD).

Analyzing the situation of the diagnosis of the precursors diseases, we found that a 45% of patients with arterial hypertension, 48% of diabetics and 34% of hypertensive diabetic patients, have not been studied as RD patients.

As a conclusion, CAC(4) in its extraordinary report says: “there has been an improvement in the identification and reporting of the precursor diseases, however, the gap between the early detection, the correct and complete study of CRD and the monitoring of this population in Nefro-protection programs is still very wide. The low percentage of inclusion in programs of Nefro-protection, is in accordance with the disappointing results of the Nefro-protection, where it is evident that only until the CRD progress and demands strict monitoring, there are better results. Yet, cases with early stages of CRD or populations at risk are not included in these same strategies of monitoring3. In Colombia there are excellent programs of renal-protection, which have provided highly satisfactory results and these ones are highly appreciated by the patients; however, their number is small and require a stronger institutional support.

The National Government, in its policy of Integral Health Care(5), January 2016,not to mention the Law 1751 of 2015, in its Article 5, said that its objective is: “The policies formulation and adoption that promote by health promotion, prevention and care of illness and rehabilitation of the sequels, through collective and individual actions”. Moving forward, it defines integrality as “Equality in treatment and opportunities for access and the integral approach to health and disease, consolidating the activities of promotion, prevention, diagnosis, treatment, rehabilitation and palliation for all people”. In Chapter 3.1.3, Integral Risk Management in health is “a strategy in order to anticipate, detect and treat the diseases prematurely to prevent or shorten their evolution and their consequences”.

This conceptual framework, allows us to develop a concrete approach in relation with the Integral Management of Renal disease risk that begins with the early detection of the main precursors at primary care level, continued with the training of Primary Care Physicians (PCP) for the proper treatment of these pathologies, as well as the assessment of renal compromise, through a simple measure of the TFG and the global cardio renal risk with the measurement of the relation albuminuria/creatinuria already established in the guidelines of the Ministry of Health. Subsequently, and in accordance with guidelines that have been developed as individual efforts of important CRD groups of prevention in Colombia but which have not yet been agreed at the national level, it must be determined patterns of these patients monitoring, including laboratory tests and the criteria for referral to specialized levels of management.

The prevention is changeable and must be based on a conjunction of social of wills. It is therefore necessary to guarantee a synergy between the State, the EPS and the IPS providing real programs of prevention and community, in order to generate a compromise which allows us to develop a model that allows us to integrate community education, early diagnosis of the risk factors from the Primary Health Care, appropriated mana-

gement (2)of these factors and their early correction and diagnosis of the disease in order to avoid disease burden and high costs of tertiary care of complications. The containment of the high cost of the CRD should be done from the start of the precursors or even more early with the healthy life styles and the non-pharmacological measures trying to prevent the rapid evolution of the disease.

Given the magnitude of the problem and the large number of CRD patients (931 427, according to the ACC), which will increase in proportion to the CRD active detection and assessment in very early stages of its evolution, it is necessary to generate other spaces in order to attend the MAP in the appropriate management of these patients. It is here where global experiences, such as the Innovative Center for Renal Care of the Minneapolis Veterans Affairs Health Care System at the University of Minnesota6, showed that interventions such as telemedicine can have similar results to the usual care of the patient, which converts them into viable assertive and massive alternatives for boarding and treatment of the CRD in a joint work between MAP, internists and nephrologists at the three levels of care.

The Integral Management of Renal risk cannot be considered only as a query of Nefroloogy, it must be a multidisciplinary program, where the attention will be given, in a holistic manner, the patient and his family, with the assessment of clinical condition, laboratory, nutritional, revision of its comorbidities that influence on the progression of the CRD , psychological support for their emotional problems and decision-making related to the RDT and with a great educational knowledge on their disease, its complications, the importance of healthy lifestyles and the adherence to the therapy and to the monitoring.

It is for this reason that it should be provided by a specialized group of people and not only by one specialist. This management should also cover the palliative management programs of the CRD, of whom there are very important and valuable experiences in Colombia, since not all patients are candidates for a RDT program of RDT.

There is a need for a commitment on the part of the EPS to work jointly with these programs or, in some cases to further develop them in an appropriate manner. You must break the paradigm of the inadequate payment by prevention, since the saving for comparison with the costs of the RDT may show a great impact in relation with their cost-effectiveness. From nephrologists there must also be a better perception of prevention programs and consider as a great opportunity to return to the Internal Medicine and as a job option as important as the RRT.

If we change the perception of the Integral Management of renal risk, and we work together with the health systems of our regions, we will, one day, improve the quality of our patients' lives and rationalize the ERECT costs. Then... The Chimera will have become a reality!

Alvaro Market Juri

Internist Nephrologist Clinical Director

Risk Management Adviser SAVIASALUD DAVITA kidney renal

Mercado.alvaro@gmail.com