

The mission of a hospital-based nephrology unit

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■ INTRODUCTION

Dialysis and transplantation promoted the emergence of Nephrology as an independent discipline from Internal Medicine. Initially a Nephrology Unit had the mission to cope with the growing demand of those techniques and therapies as well as with the complications associated with them. Dialysis (either haemodialysis or peritoneal dialysis) and transplantation became a standard of care of end-stage renal disease patients with increasing safety and outcomes in quality as well as in quantity of life.

In the other end of the spectrum of nephrological intervention there is an increased awareness of the epidemic nature of chronic kidney disease (CKD)¹⁻³. The new instruments available for estimating glomerular filtration (GFR) and stratification of CKD lead to the perception that CKD is as prevalent as diabetes in the general population, which explains the great incidence and prevalence of dialysis in some developed countries. Portugal has one of the highest rate of incidence of dialysis in Europe and even in the world and, more perplexing, substantially higher than in Spain which has almost the same demographic profile, GDP and health-care system⁴. Therefore, it is time to re-evaluate the mission of a Hospital-based Nephrology Unit adding a new focus on prevention of CKD. Dialysis and transplantation will continue to be the cornerstone of nephrological

intervention but prevention of kidney disease and nephroprotection should gain an increasing importance in the next years.

■ TO PROMOTE THE PREVENTION OF KIDNEY DISEASE

Chronic kidney disease in its early stages is almost non-symptomatic and can be easily overlooked by the general population and, more importantly, by health-care professionals. Awareness of CKD by doctors depends on an appropriated use of the new instruments for the diagnosis and staging of CKD. In a recent experience, a quiz applied to doctors attending a post-graduate course in Nephrology, we realized that a substantial number of the general practitioners (GP) were not able to adequately stratify CKD in stages 1 to 5. Therefore, it is a mission of the Nephrology Service to provide medical education of the health-care professionals to better accomplish the task of early identification of CKD. To achieve this goal nephrologists from a Nephrology Service should be available not only for a formal educative plan (meetings, workshops, etc.) but also for interactive discussions on a patient level by providing an easy way for communication (e-mail, mobile phone, etc.) with the GPs of the region, stressing the importance of preventive measures to delay the progressive nature of CKD. Implementation of such

a programme will increase the confidence of the GP to care for patients with CKD, which ultimately means that a substantial number of patients in early stage 3 (with estimated GFR greater than 45 ml/min) can be adequately followed-up in a primary-care setting after a first appointment with a nephrologist. The creation of a close link between the Nephrology Unit and the GP will ultimately result in providing adequate nephroprotection measures to a large number of patients with consequent delay in the progression of CKD to more advanced stages and, hopefully, reducing the number of patients needing renal replacement therapies.

Therefore, awareness of the CKD condition and the classical risk factors for CKD is an important first step to fight against the burden of CKD in our society and a modern Nephrology Unit, should have a decisive role to solve this problem.

■ TO PROVIDE ADEQUATE NEPHROPROTECTION TO PATIENTS WITH CKD

Nephroprotection is based on simple and cheap interventions aiming at the delay of the progressive nature of CKD. Several factors have been identified in which intervention is recommended and others whose control is advisable although not completely proved (see KDOQI Guidelines for details)⁵.

Traditionally nephroprotection is provided by nephrologists in a setting of outpatient nephrology clinic. However, patients with CKD are frequently seen by cardiologists, diabetologists, and internists (and other specialists) as outpatients and inpatients and it is a mission of the Nephrology Unit to promote discussion on the best way to give nephroprotection to CKD patients. Moreover, it is particularly important to avoid episodes of acute kidney injury in a hospital setting, as this is associated with progression of CKD. In this regard a Nephrology Unit should alert the remaining specialists for the use of contrast for imaging purposes and to set up a treatment protocol to minimize the use of contrast when this is unavoidable. In the same line of action is the alert for the use of nephrotoxic drugs, as well as those that interfere with the delicate balance of glomerular filtration and tubulo-glomerular feedback.

■ TO PROVIDE CLOSE COOPERATION WITH THE FACULTY OF MEDICINE

Teaching is a noble activity of a Nephrology Unit as teaching requires preparation of the classes and update to more recent advances in the field. A nephrology team should improve their teaching skills giving classes regularly and the best way to do it is by closely cooperating with the Faculty of Medicine.

However, teaching in a Nephrology Unit means consignment of human resources and time for teaching as students should be closely oriented in the process of learning and conflicts may arise with the management team because productivity may suffer or will result in increasing demands to the nephrology team.

On the other hand, it is important to define clearly which subjects should be presented to the students – reasonably, the programme should stress the most important issues in nephrology that are transversal to any doctor in medicine, e.g., chronic kidney disease and acute kidney injury. Although internists are able to teach these subjects, nephrologists can do it in an experienced way which is better for the students. Other subjects, such as dialysis and renal transplantation, should also be included as an increasing number of patients is anticipated in the near future.

■ TO KEEP PACE WITH THE INNOVATIONS IN NEPHROLOGY

Most innovations in nephrology are related with the introduction of new drugs (i.e., belatacept for renal transplantation) although biotechnology improvements (i.e., portable dialysis) could also occur. It is commonly said that, besides the advances in basic sciences, such as genetics, biotechnology, and material sciences, nephrology has the lower rate of randomized controlled trials when compared to other specialties, such as oncology, cardiovascular disease, or neurology⁶. However, the small number of innovations that can improve the quality of life of our patients should be efficiently monitored by nephrologists in a Nephrology Unit, as this is the setting where a better evaluation for the adequate use of these devices and new drugs is provided.

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