2007-2008 study, which were from before the protocols were modified. We also calculated and compared ratios of peritonitis/patient and year.

As shown in Figure 1, the results have been favourable since the changes in treatment protocols. Cases of peritonitis caused by gram-negative bacteria decreased by 17.5% in 2009 and 26.5% in 2010, and the resistance of these bacteria to ciprofloxacin decreased by 14.3% and 33.3%, respectively.

The ratio of cases of peritonitis/patient and year were 0.65 in 2009 and 0.6 in 2010, which is an improvement over the results from 2007 and 2008 (1.01 and 0.86, respectively).

Another result that highlights the new treatment in caring for the outflow orifice is that the same micro-organism was encountered both in the outflow orifice and from cultures of the peritoneal fluid in only 7 cases, and 100% of these were gram-positive bacteria.

In our opinion, these data support the idea that performing periodical reviews of treatment protocols and sensitivities to medication at each centre is a very important tool, both in the prevention and treatment of infectious complications of PD.

Conflicts of interest

The authors have no conflicts of interest to declare.

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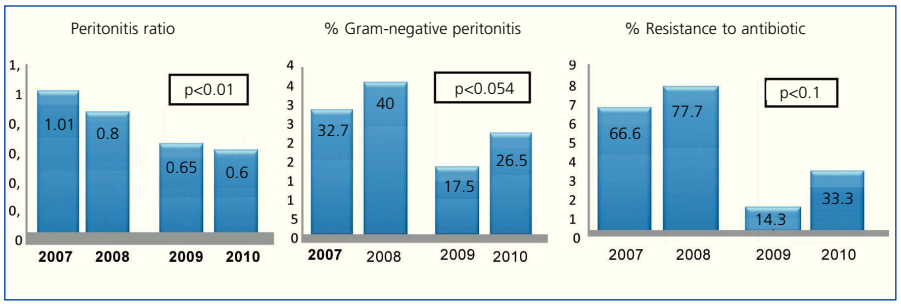

Figure 1. Description of the ratio of peritonitis/patients and year, percentage of peritonitis due to gram-negative bacteria, and resistance to antibiotic treatment. Comparison of the two-year period of 2007-2009 and 2009-2010.

Proposals for new classifications regarding chronic kidney disease: A promising future

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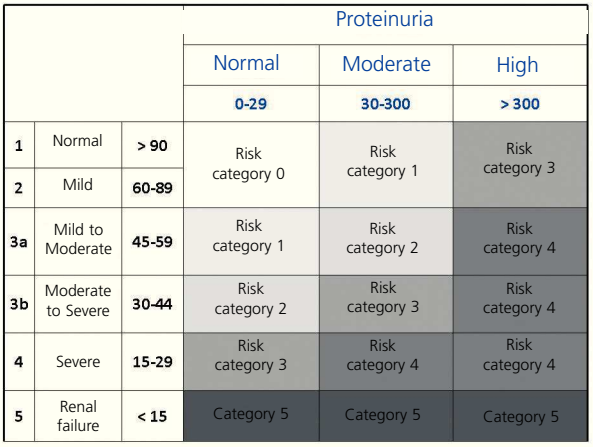
To the Editor,

Chronic kidney disease (CKD) is a common, treatable health issue that is well-known around the world. Although it is difficult to evaluate the repercussions that the various approximations to structuring the disease in recent years have had: a) classification of CKD according to the *NKF-KDOQI 2002*[1]*; b*) consensus from the MDRD[2] for estimating glomerular filtration rate (eGFR), and/or c) amplification of the use of albumin/creatinine ratios (ACR),[3] their importance has been, without a doubt, very substantial, especially in non-nephrological fields.

However, nothing is perfect, and several studies have demonstrated that proteinuria should be considered as an independent risk factor, both for the progression of CKD and mortality. As such, it would be logical to include this measure as a parameter used for stratifying patients with this disease. In this sense, the Kidney Disease: Improving Global Outcomes (KDIGO) has promoted several initiatives.[4,5] Tonelli, et al[6] presented their proposal for a new classification system based on risk categories, including proteinuria and eGFR, comparing it to the KDOQI-2002 in terms of referrals to nephrological consultations. In the accompanying editorial, Levey, et al[5] refer to another similar classification, but one that adds more categories of proteinuria (KDIGO-2009 proposal) (Figure 1).

Recently, in the yearly meeting of the GRUPERVA in Granada, we presented the proposals of Levey[5] and Tonelli[6] as "the promising future in store for us," primarily from a non-nephrological point of view, and we analysed their application in our field of medicine.



			Proteinuria		
			Normal	Moderate	High
			0-29	30-300	> 300
1	Normal	> 90	Risk category 0	Risk category 1	Risk category 3
2	Mild	60-89			
3a	Mild to Moderate	45-59	Risk category 1	Risk category 2	Risk category 4
3b	Moderate to Severe	30-44	Risk category 2	Risk category 3	Risk category 4
4	Severe	15-29	Risk category 3	Risk category 4	Risk category 4
5	Renal failure	< 15	Category 5	Category 5	Category 5

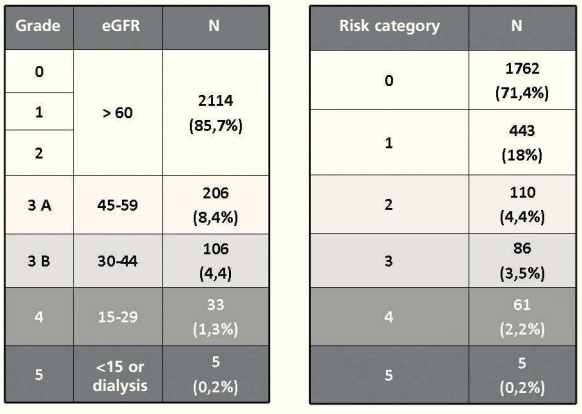
Tonelli, et al.[6]

Figure 1. Description of the ratio of peritonitis/patients and year, percentage of peritonitis due to gram-negative bacteria, and resistance to antibiotic treatment. Comparison of the two-year period of 2007-2009 and 2009-2010.

We used paired measurements (M) of glucohaemoglobin A (HbA$_{1c}$) and fasting blood glucose levels (FBG) from our health area between September 2009 and February 2010 that were derived from primary care (PC) and hospital care (HC) settings. We assumed that the majority of measurements were taken from diabetic or pre-diabetic patients, which would give greater weight to the prognostic value of proteinuria.

First we sought to explore whether, as the guidelines indicate, these measurements were accompanied by a kidney profile (eGFR and ACR), and secondly, we evaluated the influence of classifying according to the KDOQI-2002 or Tonelli, 2011[6] systems (we opted for this method since it was more simple).

We accumulated a total of 3953 valid measurements, 3018 of which (76%) were from PC and 935 (24%) were from HC. In our sample, 2169 patients (55%) were women (M/W), and the rest, 1784, were men (M/M). The M of A$_{1c}$/FGP were accompanied by requests for creatinine measurements in 98% of cases, eGFR in 72%, and ACR in 67%.



Grade	eGFR	N
0	> 60	2114 (85,7%)
1		
2		
3 A	45-59	206 (8,4%)
3 B	30-44	106 (4,4)
4	15-29	33 (1,3%)
5	<15 or dialysis	5 (0,2%)

Risk category	N
0	1762 (71,4%)
1	443 (18%)
2	110 (4,4%)
3	86 (3,5%)
4	61 (2,2%)
5	5 (0,2%)

Left: KDQI classification, 2002; Right: New classification by Tonelli, et al.[6]

Figure 2. Comparative results of the application of the different chronic kidney disease classifications to measurements from our studies.

If we compare by the origin of the patient (PC vs HC), creatinine levels were requested in 98% vs 98% (NS), eGFR was requested in 77% vs 54% (P<.01), and ACR was requested in 74% vs 46% of cases (P<.01).

The results obtained from using the two classifications mentioned are summarised in Figure 2. In accordance with Tonelli, 2011, the low-risk situations (categories 0 and 1) increase, the moderate risk situations (2 and 3) decrease, and high-risk (category 4) also increase.

In spite of the usual biases inherent to observational retrospective studies that only examine measurements, we can state that: firstly, the normal evaluation of renal profiles is not correctly carried out, not all of the recommended parameters are requested; secondly, applying the new classifications, the highly debated level 3 of the KDOQI, 2002 decreases, due to the inclusion of proteinuria, provoking those patients that do not have this condition to descend to a lower category, whereas those that do are raised in category; and as such, lastly, the use of the new classifications can give greater reliability to the categorisation of patients at risk of CKD, and consequently improve the quality of referrals to nephrological consultations.

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Peritoneal dialysis after removing the catheter because of peritonitis

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To the Editor,

Peritonitis is the primary cause of morbidity, mortality, and technique failure in peritoneal dialysis (PD).

Several studies have shown that catheter removal (CR) is necessary in as many as 16%-18% of cases.[1] The most common causes of peritoneal CR due to peritonitis are: fungal peritonitis, enteric peritonitis, and cases associated with other clinical circumstances (simultaneous infection of the subcutaneous tunnel, cases refractory to treatment, and recurring infections).

Following CR, a high percentage of patients decide to stay with the same method of depuration treatment. These patients tend to have a low technique survival due to adherence and ultrafiltration failure.[2]

If patients decide to reinitiate PD, it is important to keep in mind:

1. There is no reliable, objective method that can indicate the existence of peritoneal damage before inserting a catheter: ultrasound, computed tomography (CT), and magnetic resonance (MRI) have all been shown to have low sensitivity and only provide imprecise detection of alterations.3
2 The catheter should be inserted under open or laparoscopic surgery in order to obtain visual information about the abdominal cavity.
3, The new catheter should be inserted a minimum of 3-4 weeks after the complete recovery from the infection.
4. In the case of early catheter dysfunction, a peritoneography can be useful in the chance of compartmentalisation of the peritoneum.

We carried out a retrospective study during the last five years on patients in our unit that required CR because of peritonitis and that later decided to reinitiate PD.

CR was required in 11 patients from our study population following cases of peritonitis in the last five years.

We performed abdominal CT scans for each prior to inserting the second catheter.

Only one patient was denied reinitiation of PD when the CT scan revealed an abdominal image indicative of a small abscess two months after the removal of the first catheter.

The second catheter was inserted in all cases under general surgery conditions; mild adherence was observed in two cases, which were remedied.

The mean age of patients in our study was 62.8 years (range: 30-77).

Mean albumin levels were 3.5mg/dl (2.8-4.2); mean D/P creatinine at 240 minutes: 0.75 (0.69-0.8); mean D/P creatinine 240 minutes before removal: 0.78 (0.63-0.9); mean total number of cases of peritonitis per patient: 2.6 (1-5), and the mean time until the appearance of the first case of peritonitis was 18 months (1-47).

The micro-organisms responsible for the cases of peritonitis, the existence of associated pathologies, the time until reinsertion of the second catheter, and patient evolution (resolution or lack thereof of the infectious problem before the CR) are summarised in Table 1.

In our study sample, almost all patients whose catheters were removed during

Table 1. Causative micro-organisms and patient evolution following removal of the peritoneal dialysis catheter

Data for Micro-peritoneal organism	Germen responsable	Pathology associated	Time until reinsertion (months)	Evolution
No	*E.coli*	No	5	Good, continuous PD
	Serratia	No	2	Good, continuous PD
	Negative culture	No	0	Kidney transplant
Yes	*Pseudomonas*	No	3	HD Reduced UF
	Pseudomonas	No	2	HD Insufficient dialysis
	E. coli	Diverticulitis	2	HD Compartmentalisation
	Candida	No	3	Recurrence
	Candida	No	4	Good Kidney transplant
	Corynebacterium	No	48	Recovery of renal function
	Burkolderia cepacia	Colecistitis	2	HD Compartmentalisation