that salt consumption (greater than or equal to 10 g per day) or excessive alcohol intake (greater than 60 g per day)[4,5] increase blood pressure. However, no analysis of these factors has been performed by the participants, even though they should have been controlled either in the design or in the statistical analysis to evaluate the efficacy of spironolactone. Furthermore, in the section of statistical analysis, the authors mention that the variables of age, sex, body mass index, presence of type 2 diabetes mellitus and glomerular filtration rate were adjusted in a multivariate regression. Nonetheless, it is not specified which regression model was used to adjust these variables, and this information is not shown in the results section.

Finally, despite the observations made, we would like to emphasise this research's notable contribution to RHTN, and hope that other authors continue to contribute adding scientific evidence in this area.

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Unconventional route of administration of sodium zirconium cyclosilicate via nasogastric tube: A case report

Vía de administración inusual de ciclosilicato de sodio y zirconio a través de sonda nasogástrica. A propósito de un caso

Dear Editor,

Hyperkalemia is a common electrolyte disorder in chronic kidney disease (CKD): it carries cardiovascular risks and may have serious consequences if not adequately controlled.

The use of standard therapies and osmotic resins (calcium and sodium polystyrene sulfonate) has an uncertain efficacy for chronic treatment.[1] In recent years, new tools have also become available: patiromer and zirconium cyclosilicate. The latter, when compared to placebo, has demonstrated a significant and sustained reduction in potassium levels at 48 h in patients with stage 3-4 CKD.[2]

Here we present the case of the use of zirconium cyclosilicate by an uncommon means of administration with good results.

The case is a 45-year-old woman with a personal history of arterial hypertension, aortic insufficiency and CKD due to interstitial nephropathy that required nephrectomy at the age of 18 years due to chronic pyelonephritis. She had a renal transplant from a living related donor (her sister) with baseline renal function of 22 ml/min GFR.

She was taken to the emergency room due to an abrupt loss of consciousness and fever. In the previous days she had little food ingestion and reported dysuria and mechanical chest pain.

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Table 1 – Evolution of analytical parameters after starting treatment with sodium cyclosilicate and zirconium.

	Day 0	Day +1	Day +2	Day +3
Urea	341	NC	311	264
Creatinine	2.52	NC	2.1	2.1
Sodium	148	NC	144	144
Potassium	6.5	NC	4.7	4.4

Complementary tests: negative urine culture, normal cardiac function and analytical tests revealed plasma creatinine (sCr) of 3.2 mg/dl and K+ of 4.2 mEq/l. Benzodiazepine intoxication was ruled out. Lumbar puncture was performed with positive PCR for HSV. Cranial CT showed right herpetic meningoencephalitis and multiple foci of intraparenchymal hemorrhagic necrosis with mass effect.

The patient's neurological status deteriorated, requiring admission to ICU. During her stay in ICU she presented worsening renal function with peak Crp of up to 4 mg/dl and hyperkalemia of 7 mEq/l secondary to tissue release and in the context of exacerbated CKD (Table 1). We initiated intravenous calcium gluconate, calcium polystyrene sulfonate (CPS) in enemas and by nasogastric tube, 1/6 M intravenous bicarbonate and intravenous furosemide, without improvement. There were important problems for the use of CPS by nasogastric tube due to obstruction, making administration impossible.

Hemodialysis was ruled out due to the findings of these acute brain lesions and the risk of increasing cerebral edema. In view of the poor prognosis, the use of continuous techniques was ruled out.

We decided to initiate treatment via nasogastric tube with sodium cyclosilicate and zirconium 5 g up to 2 sachets every 8 h (for 2 days and subsequently 1 sachet every 24 h). From the second day, we achieved and maintained control of K+ (4.7 mEq/l), without administration complications.

Finally, and after the use of antivirals, the patient evolved favorably, leaving the coma state and recovering basal renal function, as well as stabilizing her condition.

Hyperkalemia is a common problem in patients with CKD. Its incidence is variable (1.4–10% in hospitalized patients) and causes high morbidity and mortality with high healthcare costs.[3]

Treatment is complex and limited to a small number of therapies, with so far limited efficacy, delayed onset of action and intolerance due to gastrointestinal symptoms.

CPS has been the only K+ chelator available for the management of hyperkalemia for more than 50 years. Its use presents adverse effects such as gastrointestinal alterations (nausea and diarrhea up to mucosal damage and intestinal necrosis, hypernatremia, hypocalcemia and hypomagnesemia).[4]

The emergence of new, better tolerated and effective drugs offers good options for the treatment of hyperkalemia.

The new drugs are nonabsorbable polymers that bind potassium in the gastrointestinal tract and facilitate the elimination of fecal potassium. Zirconium cyclosilicate has a faster onset, from 1 to 6 h.[4,8]

These agents are an important advance in our arsenal for the treatment of hyperkalemia, as they are more selective for potassium ion, exhibit an improved adverse event profile, and have a more consistent potassium-lowering effect. The efficacy of both has been documented in clinical trials, while clinical data for CPS are limited.[7]

Sodium zirconium cyclosilicate has established efficacy and safety in clinical trials. In studies of patients with chronic hyperkalemia, zirconium cyclosilicate 3 times daily significantly reduced serum K+ concentrations within 48 h, and a dose of 5 or 10 g once daily effectively maintained normal potassium levels for 14 to 28 days.[5–8]

There has been some concern due to the sodium content of a 10 g dose (approximately 1000 mg), which produces edema and/or hypertension[4]; in our case there were no adverse effects associated with the drug.

In our case, faced with a complex scenario and an unusual administration route,[9] we obtained a very good response with sodium cyclosilicate and zirconium, also allowing the reintroduction of iSRAA treatment, reinforcing the importance of individualization and the need, on many occasions, to change recommended dosages to adapt to each of our patients.

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Conflict of interest

The authors declare no conflicts of interest.

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Experience with dulaglutide in a diabetic and obese patient on incremental peritoneal dialysis

Experiencia con dulaglutida en un paciente diabético y obeso en diálisis peritoneal incremental

Dear Editor,

We read with interest the case recently published by De la Flor et al. "Efficacy and safety of semaglutide in a diabetic and obese patient on incremental hemodialysis. Does it also contribute to preserving residual renal function?",[1] to which we would like to contribute our experience in incremental peritoneal dialysis (PD).

Diabetic kidney disease is associated with an excessive increase in morbidity and mortality, especially of cardiovascular origin, and also increases progression of CKD.[2]

Glucagon-like peptide type 1 receptor agonists (GLP-1 ARs) are a family of antihyperglycemic drugs that have demonstrated strong reduction of HbA1c levels, low risk of hypoglycemia, weight reduction and cardiovascular and renal benefits.[3] In addition, the authors also describe favorable effects on preservation of residual renal function (RRF) in a patient on incremental hemodialysis.[1] However, experience in dialysis patients is limited.[4]

We present a 71-year-old male with type 2 diabetes mellitus, kidney disease secondary to diabetic nephropathy and repeated episodes of renal stones, arterial hypertension, dyslipidemia and a history of past tobacco use. His body mass index (BMI) was 32.9 kg/m^2 and his abdominal perimeter, 110 cm.

He started PD in 2020 incrementally with two exchanges per day, one of 2000 cc of physioneal® 40 1.36% and one of nocturnal icodextrin; he was in temporary contraindication for kidney transplantation due to grade 1 obesity. Serum creatinine was 6.39 mg/dl, glomerular filtration rate (GFR) measured by CKD-EPI was 8 ml/min/1.73 m^2, creatinine clearance (ClCr) and urea clearance (KrU) were 12.2 and 6.1 ml/min/1.73 m^2, respectively, both in 24-h urine; the GFR by mean level of ClCr and KrU was 9.2 ml/min/1.73 m^2 and proteinuria was 1.680 mg/24 h.

Despite good glycemic control with 18 UI/day of insulin glargine, dulaglutide was added to the treatment due to its effect on weight reduction and to improve metabolic control in PD, with the expectation of making possible renal transplantation. The starting dose was 0.75 mg subcutaneously weekly, increasing to 1.5 mg/weekly at 1 month, with good tolerance and no hypoglycemia.

At the beginning of the treatment there were no data for hyperhydration. At 4 weeks there was a significant reduction in the percentage of fat mass (26.8%) and an increase in lean mass (20.2%). At 44 weeks the weight loss was 10.4 kg, insulin requirements were reduced by more than 50%, glycated hemoglobin (HbA1c) was reduced by 16.4% and BMI by 11.6%; as for the lipid profile, triglycerides were reduced by 44.7%, total cholesterol by 47.3% and LDL by up to 65.5%. During follow-up, the dose of antihypertensive drugs was reduced, an effect that can probably be attributed to the decrease in weight, as well as the decrease in insulin therapy.

From the renal point of view, diuresis remained around 2 L/day. ClCr and KrU initially fell, as did total weekly Kt/V (at the expense mainly of renal Kt/V) to gradually increase throughout the evolution until stabilizing. Urinary creatinine and urea excretion, normalized to kilo of weight, increased from week 12 of treatment. The normalized protein catabolism rate (nPCR) was stable (Table 1). The patient received a kidney transplant 14 months after starting treatment with dulaglutide.

To date, case series have been published with GLP-1 ARs in PD that have proven their efficacy and safety, but to our knowledge there is no previous experience with these drugs

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