

magnesium hydroxide, polyethylene glycol, sorbitol and lactulose, exert their properties by drawing water into the colon and allowing easier and faster passage of the stool. In addition to the passive paracellular K⁺ excretion,¹⁰ such-induced increase in the intestinal luminal flow would activate the colonic BK channels (Fig. 1), similarly to the increased renal tubular flow that activates the renal BK channels.³ Given such pharmacological properties, the osmotic laxatives, which increase fecal K⁺ excretion through the activation of colonic BK channels, would also be beneficial in the treatment of hyperkalemia in CKD patients.

Conflict of interest

None declared.

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REFERENCES

- Clase CM, Carrero JJ, Ellison DH, Grams ME, Hemmelgarn BR, Jardine MJ, et al. Potassium homeostasis and management of dyskalemia in kidney diseases: conclusions from a Kidney Disease: Improving Global Outcomes (KDIGO) controversies conference. *Kidney Int.* 2020;97:42–61.
- Palmer BF. Regulation of potassium homeostasis. *Clin J Am Soc Nephrol.* 2015;10:1050–60.
- Woda CB, Bragin A, Kleyman TR, Satlin LM. Flow-dependent K⁺ secretion in the cortical collecting duct is mediated by a maxi-K channel. *Am J Physiol Renal Physiol.* 2001;280:F786–93.
- Rajendran VM, Sandle GI. Colonic potassium absorption and secretion in health and disease. *Compr Physiol.* 2018;8:1513–36.
- Mathialahan T, Maclennan KA, Sandle LN, Verbeke C, Sandle GI. Enhanced large intestinal potassium permeability in end-stage renal disease. *J Pathol.* 2005;206:46–51.
- Bentzen BH, Olesen SP, Ronn LC, Grunnet M. BK channel activators and their therapeutic perspectives. *Front Physiol.* 2014;5:389.
- Li HF, Chen SA, Wu SN. Evidence for the stimulatory effect of resveratrol on Ca⁽²⁺⁾-activated K⁺ current in vascular endothelial cells. *Cardiovasc Res.* 2000;45:1035–45.
- Bansal V, Malviya R, Malviya T, Sharma PK. Novel prospective in colon specific drug delivery system. *Polim Med.* 2014;44:109–18.
- Sumida K, Yamagata K, Kovesdy CP. Constipation in CKD. *Kidney Int Rep.* 2020;5:121–34.
- Mathialahan T, Sandle GI. Dietary potassium and laxatives as regulators of colonic potassium secretion in end-stage renal disease. *Nephrol Dial Transplant.* 2003;18:341–7.

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Comments: “Intervention study to verify the effect of live classic music during hemodialysis on the quality of life of patients with chronic kidney disease”

Comentario a «Estudio de intervención para comprobar el efecto de la música clásica en directo durante hemodiálisis sobre la calidad de vida de pacientes con enfermedad renal crónica»

Dear Editor,

We read with great interest the article by Serrano et al.¹ They show that listening to live music during hemodialysis treatment has a positive effect on the lives of patients with chronic kidney disease. The clinical trial focused on

evaluating descriptive variables, such as the etiology of kidney disease, hemodialysis treatment time, sex, age, vascular access by arteriovenous fistula or central venous catheter, mathematical expression Kt/V to measure the efficacy of hemodialysis treatment, consumption of psychotropic drugs and/or analgesic medication, serum hemoglobin (g/dl), serum albumin (g/dl), and mean arterial pressure (mmHg). A total of 90 patients participated in the clinical trial. They were orga-

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nized into 2 groups. Researchers carried out a prospective, cluster-randomized trial. The intervention group was exposed to music during sessions and the control group received their regular therapy.

Studies show that anxiety and depression are psychological reactions that manifest in chronic kidney disease patients during hemodialysis treatment.^{2–7}

Patients requiring dialysis may present with complications resulting from their use, as well as diet restrictions and limitations in their daily activities. This leads to a certain degree of stress. For this reason, we believe that the authors should have considered anxiety and depression among their descriptive variables and used psychological tests, such as the State-Trait Anxiety Inventory (STAI) and the BECK Anxiety Inventory (BAI),⁸ as guides.

Anxiety and depression are the most frequent mental disorders in patients with chronic kidney disease requiring hemodialysis.^{2,4,6} We would also like to emphasize that physicians do not evaluate patients for anxiety disorders³ although these are associated with an increased risk of hospitalization and mortality.⁷ In addition, healthcare professionals experience the same depressive symptoms as their patient.⁵

Conflict of interest

The authors declare that they have no conflict of interest.

REFERENCES

1. Serrano Soliva M, Rico Salvador I, García Testal A, Carrascosa López C, Ortiz Ramón R, Villalón Coca J, et al. Estudio de intervención para comprobar el efecto de la música clásica en directo durante hemodiálisis sobre la calidad de vida de pacientes con enfermedad renal crónica. *Nefrología*. 2022;42:559–67, <http://dx.doi.org/10.1016/j.nefro.2021.07.019>.
2. al Naamani Z, Gormley K, Noble H, Santin O, al Maqbal M. Fatigue, anxiety, depression and sleep quality in patients

undergoing haemodialysis. *BMC Nephrol*. 2021;22:157, <http://dx.doi.org/10.1186/s12882-021-02349-3>.

3. Cohen SD, Cukor D, Kimmel PL. Anxiety in patients treated with hemodialysis. *Clin J Am Soc Nephrol*. 2016;11:2250–5, <http://dx.doi.org/10.2215/CJN.02590316>.
4. Dziubek W, Pawlaczyk W, Rogowski L, Stefanska M, Golebiowski T, Mazanowska O, et al. Assessment of depression and anxiety in patients with chronic kidney disease and after kidney transplantation—a comparative analysis. *Int J Environ Res Public Health*. 2021;18:10517, <http://dx.doi.org/10.3390/ijerph181910517>.
5. Gerogianni G, Polikandrioti M, Babatsikou F, Zyga S, Alikari V, Vasilopoulos G, et al. Anxiety–depression of dialysis patients and their caregivers. *Medicina (B Aires)*. 2019;55:168, <http://dx.doi.org/10.3390/medicina55050168>.
6. Ćwiek A, Czok M, Kurczab B, Kramarczyk K, Drzyzga K, Kucia K. Association between depression and hemodialysis in patients with chronic kidney disease. *Psychiatr Danub*. 2017;29:499–503.
7. Ng HJ, Tan WJ, Mooppil N, Newman S, Griva K. Prevalence and patterns of depression and anxiety in hemodialysis patients: a 12-month prospective study on incident and prevalent populations. *Br J Health Psychol*. 2015;20:374–95, <http://dx.doi.org/10.1111/bjhp.12106>.
8. Julian LJ. Measures of anxiety: State-Trait Anxiety Inventory (STAI), Beck Anxiety Inventory (BAI), and Hospital Anxiety and Depression Scale-Anxiety (HADS-A). *Arthritis Care Res (Hoboken)*. 2011;63 Suppl 11:S467–72, <http://dx.doi.org/10.1002/acr.20561>.

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Tolvaptan-related toxicoderma

Toxicodermia relacionada con el uso de tolvaptán

Dear Editor,

Tolvaptan (Jinarc®) is a vasopressin V2 receptor antagonist whose action leads to a decrease in intracellular cAMP levels.¹

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This drug is indicated for patients aged 18–60 years diagnosed with autosomal dominant polycystic kidney disease (ADPKD)^{2–4} in cases of rapid progression and CKD stages 1–4.^{5,6}

It first became available on the European market in 2015 following the promising results of the TEMPO 3:4 clinical trial.⁷ Dosage is divided into two daily intakes, starting at 45 + 15 mg, with progressive increase up to the full dose of 90 + 30 mg,¹ maintaining the highest dose tolerated by the patient and monitoring the main side effects: hepatotoxicity and polyuria.⁸