

Matthieu Halfon^{1,2}, Nora Schwotzer¹,
Menno Pruijm¹ and Olivier Bonny^{1,3}

¹Service of Nephrology and Hypertension, Lausanne University Hospital, Lausanne, Switzerland; ²Transplantation Center, Lausanne University Hospital, Lausanne, Switzerland; and

³Service of Nephrology, Fribourg State Hospital, Fribourg, Switzerland

Correspondence: Matthieu Halfon, Transplantation Center, Lausanne University Hospital, Rue du Bugnon 44, Lausanne, Switzerland. E-mail: matthieu.halfon@chuv.ch

Received 30 November 2021; accepted 6 December 2021; published online 12 February 2022

Kidney Int Rep (2022) 7, 930–931; <https://doi.org/10.1016/j.kir.2021.12.040>

© 2022 International Society of Nephrology. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

In Reply to “Letter Regarding ‘Granulomatous Inflammation and Hypercalcemia in Patients With Severe Systemic Oxalosis’”



The Authors Reply: We recently reported a case series of 5 patients with primary hyperoxaluria and emphasized the importance of granulomatous inflammation in severe systemic oxalosis.¹ All cases presented diffuse hypermetabolic lesions on fluorodeoxyglucose-positron emission tomography/computed tomography and hypercalcemia. Hypermetabolic foci corresponded to areas of granulomatous inflammation elicited by calcium oxalate crystals. We thank Halfon *et al.* for their interest in our study. In line with the results from us and other groups,² they describe a patient with primary hyperoxaluria, hypercalcemia, and high 1,25-(OH)₂ vitamin D levels who was successfully treated with corticosteroids.¹ In our study, there was no report of vitamin C treatment. Some aspects of the clinical management of this condition require further discussion. During follow-up, we occasionally detected severe hypercalcemia in 3 of the 5 study patients (cases numbers 1, 2, and 3); notably, hypercalcemia in case number 3 resulted in life-threatening coma. High doses of steroids given for induction immunosuppression or acute graft rejection were only temporarily successful in controlling hypercalcemia

(cases numbers 1, 2, and 3). Unfortunately, hypercalcemia recurred when corticosteroids were tapered under 15 mg/kg/d. Furthermore, a maintenance therapy with 7.5 mg/d of steroids in cases number 1 and 2 did not prevent recurrence.

Considering the elevation of bone resorption markers, the presence of lytic bone lesions, and the high incidence of fractures observed in our study, bone antiresorptive agents (e.g., bisphosphonates or denosumab that is not renally cleared) may be a part of the therapeutic armamentarium to control hypercalcemia and to prevent fractures in patients with systemic oxalosis.

- Perrin P, Olagne J, Delbello A, et al. Granulomatous inflammation and hypercalcemia in patients with severe systemic oxalosis. *Kidney Int Rep*. 2021;7:343–349. <https://doi.org/10.1016/j.kir.2021.11.020>
- Toussaint C, De Pauw L, Tielemans C, Abramowicz D. Hypercalcaemia complicating systemic oxalosis in primary hyperoxaluria type 1. *Nephrol Dial Transplant*. 1995;10(suppl 8):17–21. <https://doi.org/10.1093/ndt/10.suppl8.17>

Peggy Perrin^{1,2,3}, Jerome Olagne^{1,2,3,4},
Arnaud Delbello^{5,6,7}, Stanislas Bataille^{8,9,10},
Laurent Mesnard¹¹, Claire Borni^{1,2,3,12},
Bruno Moulin^{1,2,3} and Sophie Caillard^{1,2,3}

¹Department of Nephrology and Transplantation, University Hospital, Strasbourg, France; ²Fédération de Médecine Translationnelle (FMTS), Strasbourg, France; ³Institut National de la Santé et de la Recherche Médicale (INSERM) U1109, LabEx TRANSPANTEX, Strasbourg, France; ⁴Department of Pathology, University Hospital, Strasbourg, France; ⁵Département de Néphrologie, Dialyse et Transplantation d'Organes, Centre Hospitalier et Universitaire de Toulouse, Toulouse, France; ⁶Institut National de la Santé et de la Recherche Médicale—Centre de Physiopathologie Toulouse Purpan, Institut National de la Santé et de la Recherche Médicale (INSERM) UMR 1043—Centre National de la Recherche Scientifique (CNRS) 5282, Toulouse, France; ⁷Université Paul Sabatier Toulouse III, Toulouse, France; ⁸Phoecean Institute of Nephrology, Marseille, France; ⁹ELSAN, Clinique Bouchard, Marseille, France; ¹⁰Aix-Marseille Univ, C2VN, Institut National de la Santé et de la Recherche Médicale (INSERM), INRAE, Marseille, France; ¹¹Service des Soins Intensifs Néphrologiques et Rein Aigu, Department of Nephrology and Transplantation, Hôpital Tenon, APHP Sorbonne Université, Paris, France; and ¹²AURAL 15, Place du Capitaine DREYFUS, Colmar, France

Correspondence: Peggy Perrin, Department of Nephrology and Transplantation, University Hospital, Strasbourg, France. E-mail: peggy.perrin@chru-strasbourg.fr

Received 4 February 2022; accepted 7 February 2022; published online 11 February 2022

Kidney Int Rep (2022) 7, 931; <https://doi.org/10.1016/j.kir.2022.02.003>

© 2022 International Society of Nephrology. Published by Elsevier Inc. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).