

A CASE OF METFORMIN INDUCED LACTIC ACIDOSIS RESOLVED WITH THE USE OF CRRT.



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Introduction: metformin induced Lactic acidosis is an uncommon but serious condition with an incidence of 2-9 cases / 100,000 patients a year and high mortality (30%). The use of metformin for over half a century makes the drug safe and effective as a first treatment in type 2 Diabetes mellitus (T2DM), also due to its pleiotropic effects.¹ Lactic acidosis has been reported as an adverse event. Subjects in whom lactic acidosis has been diagnosed often have co-morbidities or risk factors that contribute to the development of acidosis.

Case report: an 84-year-old male patient enters the emergency room for abdominal pain and cough. Altered renal function tests (Creatinine 3.2 mg/dl and Urea 132 mg/ dl) and severe metabolic acidosis (pH 6.892, BE -27.3mmol /L, pCO₂ 29.8 mmHg, HCO₃ 5.70 mmol/L) were found. His medical history was remarkable for DM2 being treated with metformin, dyslipidemia, hypertension and episodes of acute coronary syndrome, for which he had undergone 3 aortocoronary bypasses. Given the finding of hypotension (70/40 mmHg), anuria and hemodynamic instability, treatment with noradrenaline and continuous CRRT dialysis in the CVVHDF module was started. 54 hours after the start of this treatment there was an improvement in the clinical picture with an increase in bicarbonates and blood pressure and a resumption of diuresis.

Conclusions: In case of metformin-induced lactic acidosis, treatment with CRRT in the CVVHDF form in order to combine diffusive and convective action over a long duration to remove any highly compartmentalized substances or substances with a high volume of distribution, and to implement a slow and gradual correction of acidosis, avoiding rebound phenomena as much as possible, represents a useful approach for the management of this uncommon but severe condition.

1. Angela Dardano¹ · Giuseppe Daniele¹ · Stefano Del Prato, Terapia con metformina e rischio di acidosi lattica, Springer link L'endocrinologo volume 19, pages1–2(2018) <https://doi.org/10.1007/s40619-018-0399-2>