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European Renal Association – European Dialysis and Transplant Association

New entity described in CKJ: Heroin Crystal Nephropathy

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The development of acute kidney injury (AKI) after drug abuse is not uncommon. The known heroin-associated nephropathy, for example, is caused by a direct cytotoxic effect of morphine on the renal parenchyma that often results in AKI

Now a new entity has been described in the Clinical Kidney Journal (CKJ), one of the official journals of the European Renal Association – European Dialysis and Transplant Association (ERA-EDTA). A drug addict presented himself with AKI, he had a massive volume depletion and the striking feature of metabolic alkalosis. A urine microscopy was conducted and showed a surprising result: numerous intratubular crystals were observed that were associated with tubular rupture and interstitial inflammation.



Crystals observed in the urine of the heroin addict.

The authors suggest that heroin crystallization was due to this special constellation (volume depletion plus metabolic alkalosis) – probably promoted by additives in the heroin or the interplay with other drugs (the patient admitted to be a polysubstance drug abuser).

“I think the discovery of this new entity is groundbreaking. Many cases, which have been classified as the heroin-associated nephropathy so far, might have been heroin crystal nephropathy, because urine microscopy is often not done in the clinical setting”, explains Prof. Alberto Ortiz, CKJ’s Editor-in-Chief. “The paper highlights the importance to include this examination in the standard diagnosis of drug addicts with AKI. Further



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research is needed to better understand the pathogenesis of this disease and to optimize the management of these patients.”

Interested to read the full paper? Just send a copy of your press card to press@era-edta.org and ask for the pdf.

About ERA-EDTA

With more than 7,000 members, the ERA-EDTA ("European Renal Association - European Dialysis and Transplant Association") is one of the biggest nephrology associations worldwide and one of the most important and prestigious European Medical Associations. It supports basic and clinical research in the fields of clinical nephrology, dialysis, renal transplantation and related subjects. The ERA-EDTA supports a number of studies as well as research groups and has founded a special "Fellowship Programme" for young investigators as well as grant programmes. In order to involve young nephrologists in all activities of the ERA-EDTA the Council decided to create a Young Nephrologists' Platform (YNP). Besides, it has established various research networks and different working groups to promote the collaboration of nephrologists with other medical disciplines (e.g. cardiology, immunology). Furthermore, a "European Renal Best Practice" (ERBP) advisory board has been established by the ERA-EDTA to draw up and publish guidelines and position statements. Another important goal of the ERA-EDTA is education: several series of CME-courses as well as the annual congress offer an attractive scientific programme to cover the need of continuous medical education for doctors working in the fields of nephrology, dialysis and transplantation. The association's journals, NDT (Nephrology, Dialysis, Transplantation) and ckj (Clinical Kidney Journal), are currently the leading nephrology journals in Europe. The ERA-EDTA Registry is a large epidemiologic database comparing countries by assessing nephrology practice throughout Europe. Finally, ERA-EDTA is member of the European Kidney Health Alliance (EKHA), a consortium of renal societies that actively interacts with the European Parliament. For more information please visit www.era-edta.org