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Viola D'Ambrosio

The Role of Oxalate in End Stage Kidney Disease

Duration	6 months
Short Bio	I am a nephrologist and PhD student at Università Cattolica del Sacro Cuore of Rome, Italy. I graduated from Sapienza University medical school and completed her nephrology training at A. Gemelli Hospital in Rome. I joined the London Tubular Centre in 2022 as a clinical fellow and in 2023 I conducted the project entitled “the role of oxalate in end-stage kidney disease” as part of my doctoral research under the EJP-RD fellowship program at UCL – Royal Free Campus. My clinical and academic interests focus on rare kidney diseases, tubulopathies and kidney stones.
Home Institution	Univeristà Cattolica del Sacro Cuore di Roma
Host Institution	London Tubular Centre, UCL, Royal Free Campus
Project Description	Recent evidence suggests the role of oxalate as a uremic toxin in patients affected by end-stage kidney disease (ESKD) involved in inflammation and atherogenesis, two well-known cardiovascular risk factors, even in the absence of primary hyperoxaluria. Our aim was to investigate calcium oxalate (CaOx) and calcium phosphate (CaPO ₄) deposition in peripheral arteries of patients with ESKD scheduled to receive a living donor kidney transplant. Calcium oxalate and calcium phosphate deposition analysis (concentration and distribution) have been carried out on native discarded arterial tissue collected during surgery (iliac artery). This study could help understand in depth oxalate pathophysiology and be beneficial not only to CKD but also to primary and secondary hyperoxaluria. Moreover, it could also address cardiovascular risk in ESKD and pave the way for the long-term employment of plasma oxalate lowering agents in this population.
Personal Statement	This fellowship has been an incredible opportunity to grow both as a clinician and as a researcher. I was able to gain skills in basic, translational and clinical research that will surely have a significant impact on my future career. Moreover, this opportunity strengthened the already-existing collaboration with the host institution and helped me develop new exciting ones. This has already led to several interesting projects in the field of rare tubulopathies and to new ideas for future collaborations.