Post Preeclampsia Renal Project

First author: PECHERE-BERTSCHI Antoinette, Médecin adjointe agrégée, Département de Médecine Interne, Service d'Endocrinologie, Service de Diabétologie et Nutrition et Département de Médecine Communautaire, Service de Premier Recours
Co-authors : Ariane de Agostini, PhD, Department of Gynaecology and Obstetrics and Department of Medical Genetics and Laboratory, University Hospital Geneva, Patrick Saudan, Médecin adjoint agrégé, Department of Internal General Medicine, Service of Nephrology, University Hospital Geneva, Muriel Bochud, Cheffe clinique, University Institute of Social and Preventive Medicine, CHUV, Lausanne, Marc Maillard, Head Laboratory, PhD, Department of Nephrology and Hypertension, CHUV, Lausanne, Ruth Landau, Department of Gynaecology and Obstetrics,University of Washington Medical, Seattle, USA and Department of Gynaecology and Obstetrics,University Hospital Geneva, Michel Burnier , Head, Department of Nephrology and Hypertension, CHUV, Lausanne, Olivier Irion, Head, Department of Gynaecology and Obstetrics,University Hospital Geneva

This project focuses on investigate the salt-sensitivity of the renal function and blood pressure in post-preeclamptic women. Recent epidemiological studies have provided strong evidence that preeclampsia is not just a disease of pregnancy that resolves at the time of delivery, but represents a 'risk marker' for an unrecognized dysfunction that is associated with the development of cardiovascular and end-stage renal diseases, and metabolic syndrome later in life.
Our project aims to analyze the salt-sensitivity of the arterial pressure and renal hemodynamics 6 weeks after delivery in preeclamptic women. Salt-sensitivity is itself considered as a cardiovascular risk. Several recent studies have found an association between CYP3A5 and ABCB1 genes, and renal salt-sensitivity in humans. We plan also to determine if there is an association between renal outcomes, salt- sensitivity, and CYP3A5 and ABCB1 polymorphisms. Second, we will screen a cohort of PEC women postpartum to detect those with residual impaired renal function, and determine whether therapy with a blocker of the rennin system might improve renal function, and other all strong surrogate markers of cardiovascular risk.
The advantage of identifying physiopathologic and genetic determinants early in the post-partum is to be able to target preventive and therapeutic measures at an early stage in the disease process.