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**Forced diuresis with matched hydration by RenalGuard after kidney transplantation: Pilot study****Nicolas Viallet**

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The RenalGuard system helps to achieve a high diuresis while simultaneously balancing urine output and venous fluid infusion to maintain euvoolemia. This strategy has revealed to be beneficial to prevent contrast-induced acute kidney injury. We hypothesize; it could be extended to kidney transplantation as a renoprotective action to prevent delayed graft function. The objective of our pilot study was to evaluate the feasibility and safety of RenalGuard in kidney transplant. Between December 2013 and September 2014, 11 kidney transplanted patients had a forced diuresis by furosemide with matched hydration by RenalGuard during the first 36 hours post transplantation (DF group). They were retrospectively compared to 11 similar patients who had spontaneous diuresis (DS group). The 11 patients of the DF group were transplanted from seven deceased donors (four with extended criteria) and four living donors. Their urine output was 265 (154-350) ml/h vs. 69 (51-107) ml/h in the DS group. The diuresis quantification by RenalGuard appeared strongly correlated with the nurse measurement ( $R^2=0.96$ ,  $p<0.001$ ) and real-time matched hydration allowed no significant change in weight of patients. Three patients of DF group had major hyperglycemia when using glucose 5% as compensation. Hypokalemia were significantly more frequent in DF group. Use of Ringer lactate with the addition of 1 g of KCl per liter should prevent the occurrence of electrolyte disturbances. There was no difference of renal function. We report for the first time the RenalGuard experience in renal transplant patients. Some precautions are necessary in this population to prevent hyperglycemia, hypokalemia or disorders of bladder emptying.

**Biography**

Nicolas Viallet is a Medical Doctor. He completed his Medical studies from Montpellier University, France. He is Nephrologist at Felix Guyon University Hospital, St Denis, France.

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