

**We conduct a multicenter, double-blind, randomized controlled trial and test the hypothesis that weekly use of urokinase lock will reduce the incidence of thrombotic malfunction by 50% in prevalent hemodialysis patients with a history of thrombotic malfunction” Bonkain et al (2017).**

Abstract:

**Introduction:** The prophylactic use of recombinant tissue plasminogen activator once weekly reduces the incidence rate of tunneled cuffed catheter (TCC) malfunction and bacteremia as compared to the exclusive use of heparin as locking solution. Restricting the use of prophylactic thrombolytic agents to patients with a history of thrombotic TCC malfunction could be more cost effective. We conduct a multicenter, double-blind, randomized controlled trial and test the hypothesis that weekly use of urokinase lock will reduce the incidence of thrombotic malfunction by 50% in prevalent hemodialysis patients with a history of thrombotic malfunction.

**Methods:** Patients with a history of at least two separate TCC thrombotic dysfunctions treated with urokinase lock during the 6 months preceding inclusion are recruited in eight Belgian dialysis units. Patients are randomized in two groups: the control group receiving Taurolock™-HEP500 (heparin 500 IU/mL, taurolidine, citrate 4%) after each hemodialysis session and the treatment group receiving Taurolock-U 25,000 (urokinase 25,000, taurolidine, citrate 4%) once a week and the standard Taurolock-HEP500 at the end of the two others sessions. The primary outcome is the incidence rate of TCC thrombotic dysfunction defined by the use of urokinase. The secondary outcomes are the incidence rate of TCC removal and systemic thrombolysis. For the study, both patients and healthcare staff are blinded to treatment allocation.

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**Conclusions:** The present trial is the first to investigate the effect of Taurolock-U 25,000



catheter lock once a week as secondary prevention in hemodialysis patients with the highest risk of TCC-related thrombotic dysfunction.

Trial registration: ClinicalTrials.gov Identifier: NCT02036255

Reference:

Bonkain, F., Van Hulle, F., Janssens, P., Catalano, C., Allamani, M., Stolear, J-C., Vandervelde, D., Libertalis, M., Treille, S., Couttenye, M.M., Dhondt, A., Van Biesen, W., Fils, J.F., Tielemans, C. and Wissing, K.M. (2017) Urokinase-containing locking solution in the prevention of dialysis catheter dysfunction: a double blind randomized controlled trial. The Journal of Vascular Access. June 14th. .

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