

# EVALUATION OF TWO CATHETER LOCKING SOLUTIONS IN HAEMODIALYSIS PATIENTS

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## Background

The two main complications for the patients dialysed by central catheter are known to be intra-luminal thrombosis and bacterial colonization. A locking solution is systematically use in our center to prevent these complications connected to the formation of a biofilm in the light of the catheter. We referenced a new pre-filled syringe with a high 46.7 % Citrate concentration.

Taurolidine 1.35%  
+  
Citrate 4%

Anticoagulant  
+  
Antibacterial activity

Citrate 46.7%



## Purpose

- To estimate the impact of the Citrate solution on the bacterial colonization.
- To evaluate the economic impact with regard to the former reference taurolidine 1.35 % + citrate 4 %.

## Material and methods

It was a 9 months retrospective study including 377 dialysed patients

### PERIOD A (5 MONTHS)

55 patients receiving Taurolidine 1.35 % + Citrate 4 %

### PERIOD B (4 MONTHS)

55 patients receiving Citrate 46.7 %

**THE NUMBER OF INFECTIONS CAUSED BY CATHETER** was established by correlation between antibiotics prescriptions delivered by the pharmacy and infection registered by a hygienist nurse. The infections on catheter were confirmed by signs of infection and fever. This lead to the realization of hemocultures. A positive result granted the prescription of antibiotics.

**THE ECONOMIC IMPACT** was estimated by comparing the use of the former solution which was systematically associated with the heparin 25000UI against the citrate 46.7 %.

## Results

The use of citrate solution 46.7% was not significant on infections

Citrate 46.7% = an economy of 7.6 € by patient

	% of infections caused by catheter	Number of sessions of dialysis
<b>Period A</b> Taurolidine 1.35 % + Citrate 4 %	6‰ (19 infections)	3135
<b>Period B</b> Citrate 46.7 %	5.7‰ (19 infections)	3300

	Cost of using the catheter locking solutions during the study
<b>Period A</b> Taurolidine 1.35 % + Citrate 4 %	10 906 €
<b>Period B</b> Citrate 46.7 %	7 569 €

- 31%

## Conclusion

The study on the infectious episodes, did not established a superiority of a solution compared with the other one. Some patients with associated pathologies (diabetes...), old catheter, poor quality of care presented infectious episodes during the two periods, thus increasing the susceptibility of the study. The citrate 46.7% referencing had a major economic impact. From a hygiene and good practices point of view, this new pre-filled syringe presentation decrease the manipulations.