

INFLUENCE OF ROUTE OF ADMINISTRATION OF LOW MOLECULAR WEIGHT HEPARIN IN HIGH-FLUX HEMODIALYSIS AND ONLINE HEMODIAFILTRATION

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Introduction

Removal of low molecular weight heparin (LMWH) can occur during high-flux hemodialysis (HF-HD) and online hemodiafiltration (OL-HDF) when it is administered pre-membrane in the arterial line of the hemodialysis (HD) circuit.

Objectives

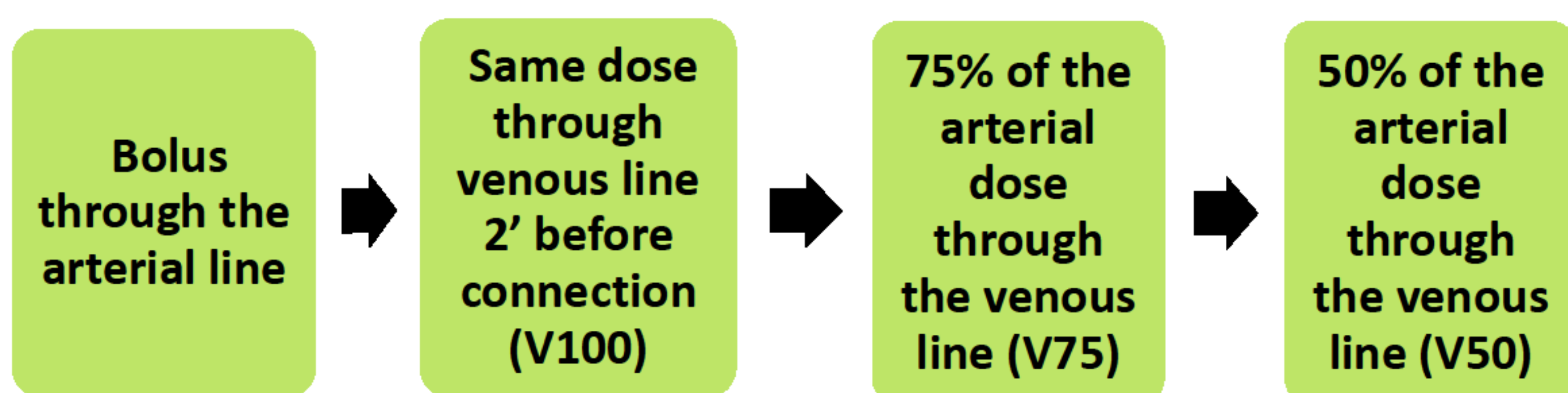
To evaluate if the efficacy of enoxaparin can be affected by the route of its administration.

Materials and methods

We enrolled 15 patients on the HD program (13 patients on OL-HDF and 2 on HF-HD).

All sessions were done with 1.8 m² helixone dialyzer, and each session lasted 4 hours.

LMWH administration was through the arterial line as baseline, then through the venous line for 3 consecutive weeks.



In each session the dialyzer and venous chamber clotting were assessed using a semi-quantitative visual scale.

In each session we determined:

- 1)KT.
- 2)Processed blood volume.
- 3)Total infusion volume in patients with OL-HDF.

DIALYZER	
0	No clots
1	< 5% of clotted capillaries
2	5 -25 % of clotted capillaries
3	> 25 % of clotted capillaries

VENOUS CHAMBER	
1	No clots
2	Evident clots

Results:

- There were no significant differences in dialyzer clotting by comparing baseline blood (0= 46.7%, 1= 40%, 2= 13.3%, 3= 0%) with V100 (0= 73.3%, 1= 20%, 2= 6.7%, 3= 0%) (p= 0.155) or with V75 (0= 66.7%, 1= 20%, 2= 6.7%, 3= 6.7%) (p= 0.388).
- Dialyzer clotting was significantly higher at week V50 than at baseline arterial, V75 and V100 (0= 0%, 1= 26.7%, 2= 53.3%, 3= 20%) (p< 0.001).
- There were no differences in KT, processed blood volume and infusion volume in OL-HDF between the different forms of LMWH

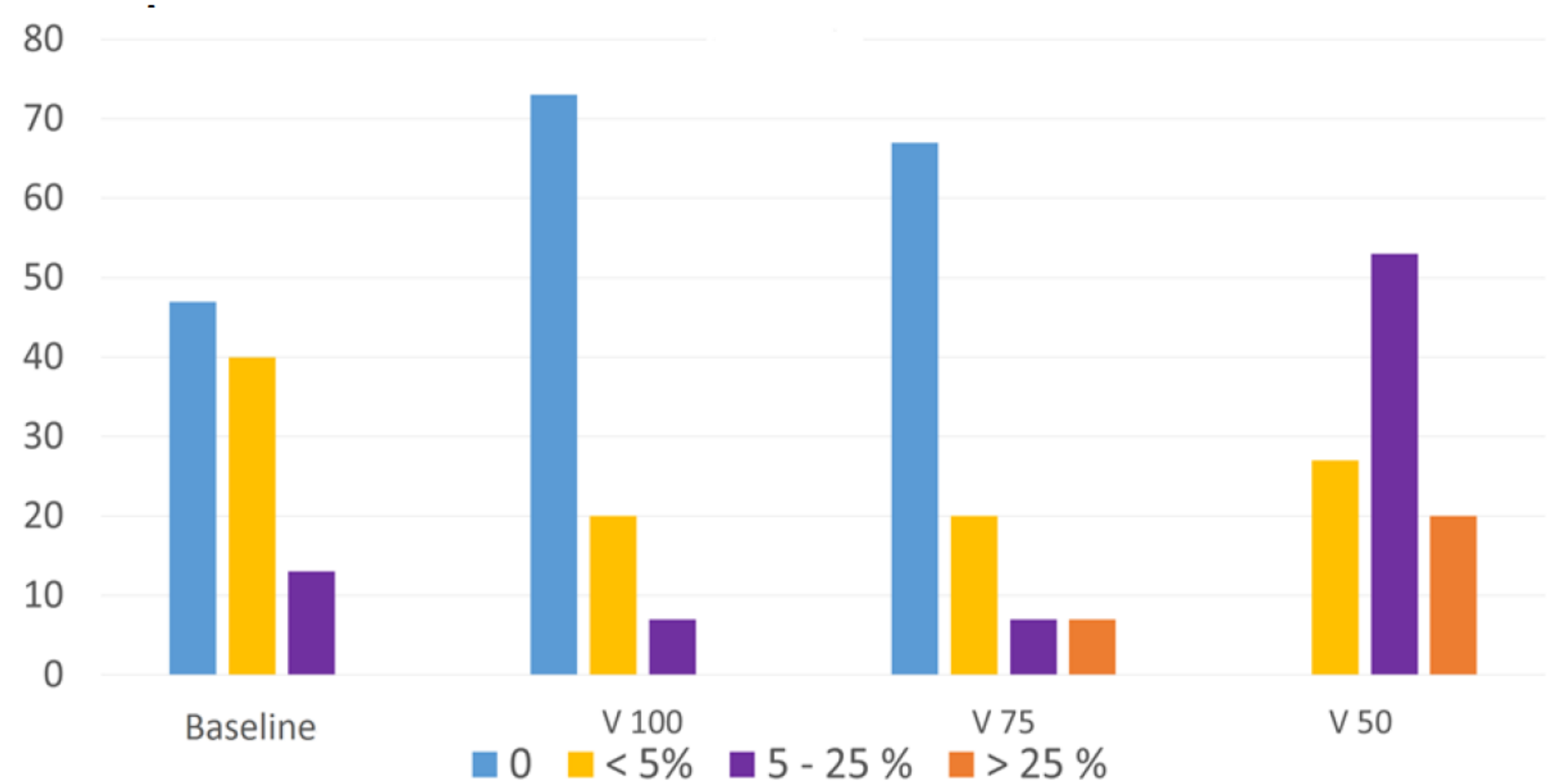


Figure 1. DIALYZER CLOTTING

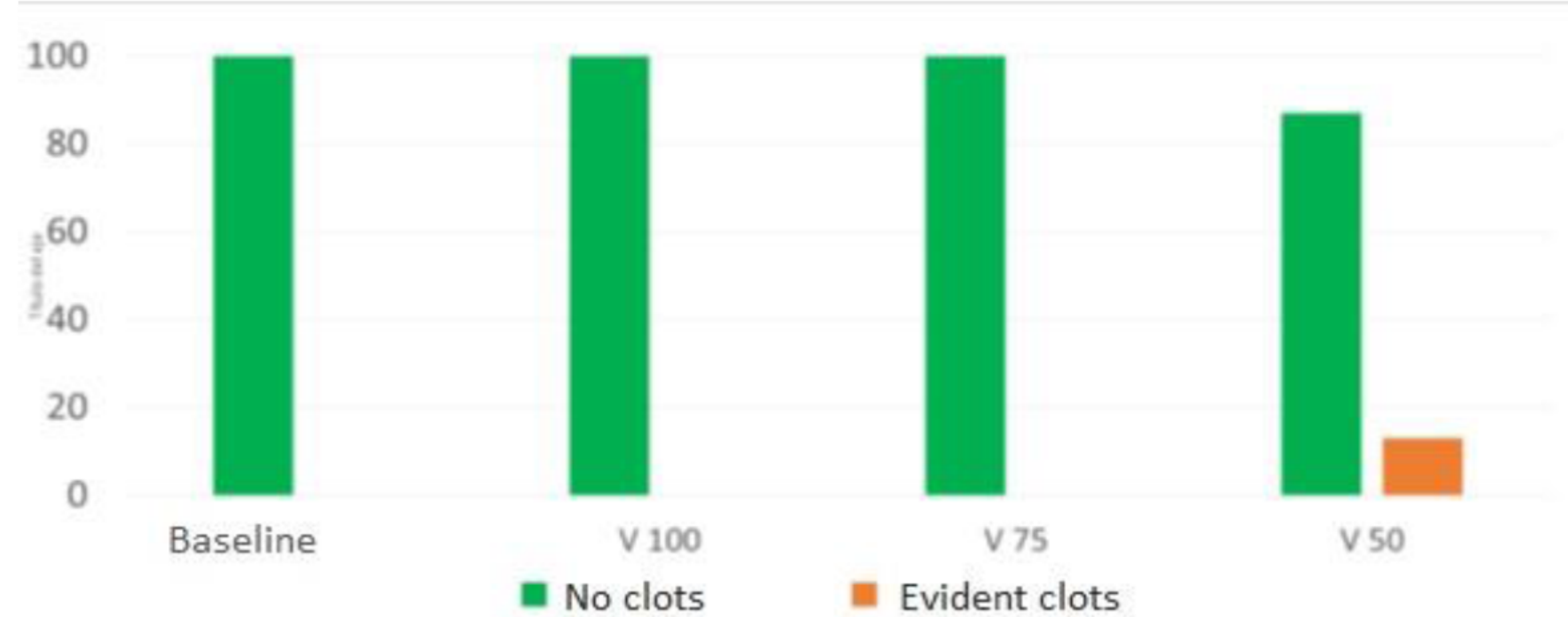


Figure 2. VENOUS CHAMBER CLOTTING

Conclusions:

Venous line administration of low molecular weight heparin before the start of hemodialysis allows a 25% reduction in the dose, both in HF-HD and OL-HDF.

