

# OPTIMAL TIME OF BLOOD SAMPLING FOR PT/PTT/INR IN HEMODIALYSIS PATIENTS WITH CATHETER LOCKED WITH HEPARIN OR CITRATE

Davinder Wadehra, Ajay Patel, Mersema Abate, Heesuck Suh, Nand K Wadhwa, Division of Nephrology, SUNY, Stony Brook, NY.

In hemodialysis (HD) patients with catheter as vascular access, heparin or citrate is usually used as locking agent to maintain catheter patency. PT/PTT/INR are usually drawn from the catheter. The aim of the study was to evaluate optimal time for PTT/PT/INR in acute HD patients. The study was done from July to Nov 2007 in the acute HD unit. 94 samples of PT/PTT/INR at 0, 30, 60 min in HD patients with a catheter were obtained from 31 patients. 29 similar samples were obtained from 8 HD patients with AV Fistula. After discarding 5 ml of blood from each port, PT/PTT/INR was drawn at 0 min, 30 and 60 min from the arterial line prior to initiating heparin. At the end of dialysis treatment, the catheter was filled with citrate 2.9% (ACD-A) or heparin 5000 U/ml to match the volume of the catheter. During first 60 min when heparin was not used, no visible clotting of dialyzers was observed. Data is summarized below (mean  $\pm$  SD):

	Catheter	AVF/AVG	P value
PTT 0	87.56 $\pm$ 86.43	31.96 $\pm$ 7.62	<0.005
PTT 30	38.33 $\pm$ 15.73	31.19 $\pm$ 6.24	0.43
PTT 60	37.64 $\pm$ 15.80	30.65 $\pm$ 6.05	0.36
PT 0	27.15 $\pm$ 30.65	13.60 $\pm$ 4.27	<0.05
PT 30	15.72 $\pm$ 5.69	13.41 $\pm$ 3.71	0.44
PT 60	15.52 $\pm$ 5.31	13.28 $\pm$ 3.56	0.50
INR 0	2.64 $\pm$ 2.76	1.27 $\pm$ .58	<0.05
INR 30	1.55 $\pm$ .78	1.25 $\pm$ .49	0.36
INR 60	1.52 $\pm$ .73	1.23 $\pm$ .48	0.42

Data suggests that PT/PTT/INR are elevated at 0 min but not elevated at 30 or 60 min in HD patients with the catheter whereas PT/PTT/INR are not elevated at 0, 30 or 60 min in patients with the AVF/AVG. In conclusion, PT/PTT/INR should be drawn at least 30 min after onset of HD in patients with the catheter.