

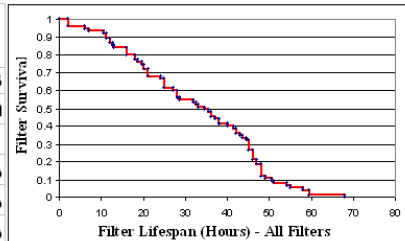
FILTER LIFESPAN IN ANTICOAGULATION-FREE CONTINUOUS RENAL REPLACEMENT THERAPY (CRRT)

Sam Wu, Arasu Gopinath, Jeffrey Berns, Sidney Kobrin
Renal, Electrolyte and Hypertension Division, Hospital of the
University of Pennsylvania, Philadelphia, PA, USA

Clotting of the extracorporeal circuit is a common problem in CRRT. A variety of anticoagulation methods, each associated with potential complications, have been utilized to prevent circuit clotting. There have been few studies in the literature examining the filter longevity of CRRT therapy performed without anticoagulation.

We conducted a retrospective case-series examining 75 consecutive filters from 21 patients undergoing continuous venovenous hemodialysis (CVVHD) using the NxStage system. The usual blood flow rate was 300 cc/min. No patients received systemic or regional anticoagulation prescribed specifically for CVVHD. The lifespan and reason for termination for each filter was examined. In addition to evaluating filter life for all circuits, we performed a separate analysis for an adjusted group that excluded circuits that were terminated for non-CRRT related reasons (ie. death, renal recovery, etc.)

Filter Lifespan (Hours)	All Filters (n=75)	Adjusted Filters (n=45)
Mean	32.6± 16.0	38.4±18.3
Median	34.5	45.0
% Filter Survival		
>=24 Hours	68%	82%
>=40 Hours	41%	58%
>=48 Hours	19%	31%



Anticoagulation-free CVVHD performed at a blood flow of 300 cc/min is associated with an acceptable filter life that is comparable to use of heparin and citrate-based anticoagulation. CVVHD without anticoagulation should be strongly considered especially in patients at high-risk for bleeding.