In Reply to ‘Hemodialysis Catheters: Which Design Is More Cost-effective?’ and ‘Use of an Uncensored Primary Outcome in a Catheter Design Trial?’

We are pleased to learn that AlBugami et al confirm our most important finding: catheter design has little, if any, influence on catheter survival and incidence of thrombosis/infection. In our large sample (>60,000 catheter-days), we used the strict preemptive catheter salvage KDOQI (Kidney Disease Outcomes Quality Initiative) protocol, which resulted in relatively low urokinase use (17-35 episodes/1,000 catheter-days). AlBugami et al used 2 mg (lock) or 4 mg (infusion) of tissue plasminogen activator when blood flow rate was <250 mL/min (M.M. AlBugami, personal communication, March 2015), corresponding with an average of 70 locks or 35 infusions/1,000 catheter-days. Comparing thrombolytic outcome across both studies is very difficult in view of the differences in indication, administration mode, and type of thrombolytic. However, we believe that our pre-emptive strategy is efficient and cost-effective and over-rides any potential initial differences in catheter costs.

The question from Drs Ashby and Corbett most likely originates from a difference in interpretation of the concept of censoring. An observation is “censored” when the observation time has been interrupted prematurely and the time to event (in our case, thrombosis/infection) has therefore not been registered. Because our study reflected standard clinical practice, there was a high degree of early censoring (recovery of kidney function, maturation of vascular access, and transfer to peritoneal dialysis therapy). Primary assisted patency was defined as the interval from access placement to catheter removal for infection/thrombosis, with censoring for non–catheter-related removal. This is entirely different from mean survival time (time to thrombosis/infection if all catheters had been followed up until the thrombosis/infection end point was reached), of which the Kaplan-Meier curve gives only a poor estimate given the high degree of censoring.

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Acknowledgements

Financial Disclosure: The authors declare that they have no relevant financial interests.

References


The Myth of the Future Burden of CKD in the United States

To the Editor:

We read with interest the article by Hoerger et al about the future burden of CKD in the United States. These authors accept the notion that as humans age, glomerular filtration rate (GFR) falls. Consequently, the application of a fixed and arbitrary threshold of GFR as a definition for “CKD,” without reference to other signs of kidney damage (such as albuminuria) will always lead to increased “CKD” prevalence as populations age. Without an age-adapted definition, the prevalence of CKD is overestimated, with a high proportion of the elderly in stage 3a.

Prognosis is now considered as a key feature of CKD classification; however, it has been shown that remaining life expectancy is not different between individuals in CKD stage 3a versus those with normal kidney function (see the second figure in Gansevoort et al).

If Hoerger et al wish to suggest that individuals can expect a 1 in 2 chance of developing CKD over their lifetimes, they should make the association of CKD risk and aging clearer. Also they need to explain the gap in “CKD” prevalence between stage 3a (around 20% of population older than 65 years of age) and stages 3b (8%) or 4-5 (<3%); clearly stage 3a neither progresses to more severe stages nor shortens life expectancy.

A solution would be to age calibrate the thresholds of estimated GFR used to define CKD in absence of other signs of kidney damage. Then, the alarming prospects of the simulation from Hoerger et al would take a more subtle and less dramatic hue.

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Acknowledgements

Financial Disclosure: The authors declare that they have no relevant financial interests.

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