KI REPORTS
KIReports.org
CLINICAL RESEARCH

Identifying Factors That Influence Physicians' Recommendations for Dialysis and Conservative Management in Indonesia

Eric A. Finkelstein[1], Semra Ozdemir[1], Chetna Malhotra[1], Tazeen H. Jafar[1,2], Hui Lin Choong[2] and Johnny Suhardjono[3]

[1]Duke-NUS Medical School Singapore, Singapore; [2]Singapore General Hospital, Singapore; and [3]Faculty of Medicine, University of Indonesia, Jakarta, Indonesia

Introduction: For elderly end-stage renal disease (ESRD) patients with multiple comorbidities, dialysis may offer little survival benefit compared to conservative management (CM). Yet, many elderly ESRD patients undergo dialysis, partly due to physicians' recommendations regarding treatment choice. This study aims to elucidate the factors that influence these recommendations.

Methods: We surveyed a convenience sample of physicians who attended the 9th Asian Forum of Chronic Kidney Disease Initiative conference. We used vignettes that vary by age and comorbidity status, and asked physicians to recommend dialysis or CM for a hypothetical patient with that profile and to predict survival with both treatment options. We also compared the physician's recommendations to patients for what they would recommend for themselves if they were diagnosed with ESRD.

Results: On average, physicians believed that dialysis extends life relative to CM. Yet, a large subset believed that CM confers greater survival. Estimates range from 17.3% (for a 65-year-old with diabetes and CHF) to 50% for patients with advanced cancer. Results further reveal high discordance regarding treatment recommendations. For a 65-year-old patient with diabetes, 62% recommended dialysis and 38% did not. For advanced cancer, the split was 25% and 75%. Physicians were far more likely to recommend dialysis for themselves than for their patients.

Discussion: This study suggests that physicians would benefit from a greater understanding of survival benefits of dialysis and CM for elderly patients with different comorbidity profiles. This would allow patients to make more informed decisions.

Kidney Int Rep (2017) **2,** 212–218; http://dx.doi.org/10.1016/j.ekir.2016.12.002
KEYWORDS: comorbidities; conservative management; dialysis; end-stage renal disease; survival benefits; treatment recommendation

End-stage renal disease (ESRD) is a global public health challenge, with 2.6 million people currently on renal replacement therapy (e.g., dialysis) worldwide. This number is projected to double by 2030, with a majority living in Asia Pacific countries.[1] Although dialysis has been shown to be effective in prolonging survival,[2,3] for very elderly patients with multiple comorbidities, dialysis may offer little to no survival benefit compared to conservative management (CM), which focuses on pharmacological management of symptoms, dietary control, and supportive care.[4,5]

There is a significant cost to patients and families resulting from dialysis. For example, patients must spend long hours being dialyzed either at home or at a dialysis center, with the latter also requiring additional travel time and costs. Dialysis patients also have greater rates of hospitalization,[6] report lower life satisfaction,[7] and are less likely to die at home, which many patients prefer.[6] As a result, even in cases in which dialysis confers moderate survival benefits, this may not be the preferred option for many elderly patients; yet, evidence shows that a majority receive dialysis when it is available.[8,9] Although many factors may be responsible for this, physician recommendations have been shown to strongly influence ESRD patients' treatment choices, especially in Asian countries.[10,11] However, the factors that influence these recommendations remain largely unknown.

Correspondence: Eric A. Finkelstein, Lien Centre for Palliative Care, Duke-NUS Medical School Singapore, 8 College Road, Singapore-169857, Singapore. E-mail: eric.finkelstein@duke-nus.edu.sg

Received 4 September 2016; revised 14 November 2016; accepted 5 December 2016; published online 12 December 2016

The issues are particularly complex in Indonesia, the fourth most populous country in the world, with more than 255 million people, a significant proportion of elderly individuals (8%), a rising burden of ESRD, and a health care system with substantial out-of-pocket costs for dialysis, albeit aspiring for universal coverage by 2019.[12]

Therefore, we conducted this study with the objective of elucidating the factors that influence physicians' recommendations for dialysis and conservative management. This study relies on a survey fielded to physicians who practice in Indonesia and attended the 9th Asian Forum of Chronic Kidney Disease Initiative (AFCKDI) conference organized in Jakarta, Indonesia, May 8 to 9, 2015. Indonesia is a lower−middle-income country with a patriarchical society in which the out-of-pocket costs are high and access to dialysis centers is limited despite recent health care reform efforts to increase access to medical care.[13–15]

We used a series of vignettes that vary by age and comorbidity status, and asked physicians to predict the median survival of hypothetical patients depending on whether they undergo dialysis or CM. For each vignette, we then asked them to choose whether they would recommend dialysis over CM. Our main hypotheses are listed as follows: (i) The percentage of physicians who recommend dialysis will decrease as patient age and comorbidity status increase; (ii) physicians will be more likely to recommend dialysis when the hypothetical patient is male and of higher economic status; (iii) most physicians will overestimate the survival benefits of dialysis relative to CM, yet the variance in the estimates will be large; and (iv) physicians with more optimistic assessments about the relative survival benefits of dialysis will be more likely to recommend dialysis to their hypothetical patients when compared to their peers with less optimistic assessments.

Finally, we compared the physician's recommendations for patients to what they would recommend for themselves. If results showed a large variation regarding the expected survival benefits of dialysis and CM, that physicians are making patient recommendations based on factors such as income or gender and/or are making recommendations for patients that are different from choices for themselves, then it suggested that greater physician/patient education regarding pros and cons of dialysis and CM, improved communication between physicians and patients regarding treatment options for ESRD, and greater patient autonomy could help to ensure that the treatments that patients receive are most likely to be consistent with their own preferences.

METHODS

Setting and Sample

The survey was made available to a convenience sample of participants attending the 9th Asian Forum of Chronic Kidney Disease Initiative (ACKDI) conference organized in Jakarta, Indonesia, as mentioned above. Nearly 1100 participants attended the conference, and research staff passed out surveys to participants as they registered in the morning and during conference breaks. There was also a booth where participants could come and request a survey at any time during the day. Eligibility for the survey was limited to physicians currently treating or counseling patients with ESRD in Indonesia. Although nearly 1000 survey questionnaires were passed out, it is not clear how many recipients were eligible to participate. In total, 216 attendees completed the survey, and 201 met the eligibility criteria. These surveys make up the analysis sample. Written informed consent was not required by our institutional review board because the survey was anonymous and the institutional review board determined that it posed no more than minimal risks to the respondents.

Survey Questionnaire

The questionnaire presented a series of vignettes describing hypothetical elderly patients with ESRD. Vignettes are commonly used for investigating clinical practice variation.[16,17] Each respondent was presented with 2 types of vignettes, namely, patient vignettes and self vignettes (Supplementary Table S1). Each patient vignette described hypothetical elderly patients who had been diagnosed with ESRD. These vignettes systematically varied across 4 attributes: age (65, 75, and 85 years); comorbidities (diabetes, diabetes and congestive heart failure, and advanced cancer); socioeconomic status (wealthy, middle class, and poor); and gender (male, female). For each vignette, participants were asked to predict additional years of survival under dialysis and CM and which treatment option they would recommend for each hypothetical patient. In self vignettes, participants were then asked to imagine that they themselves were diagnosed with ESRD at a certain age and comorbidity profile and to choose either dialysis or CM for themselves, given that profile.

The vignettes were created based on an experimental design generated in SAS that ensures efficient parameter estimates for each attribute level. Separate experimental designs consisting of 18 and 6 questions per design were generated for the patient and self vignettes, respectively. Because answering 24 vignette questions would be overly burdensome, the vignettes were subset into blocks such that each respondent