Epidemiology of chronic kidney disease in Europe

Brück, K.

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The incidence of renal replacement therapy for end stage renal disease (ESRD) varies substantially at both the global and European level. If we can determine which factors cause these differences across Europe, this may lead to the identification of health care measures effective in reducing the incidence of ESRD on a regional level. One possible cause for this variation could be a difference in the number of patients reaching ESRD. This number is mainly influenced by two factors: 1) the number of chronic kidney disease (CKD) patients at risk of progression to ESRD, i.e. the prevalence of CKD and 2) the outcomes of patients with CKD.

In 2012, the European CKD Burden Consortium was established to enable cross country comparison of both the prevalence of CKD and outcomes of patients with CKD.

Part 1 of this thesis contains studies on the prevalence of CKD. We observed a surprisingly large variation in the prevalence of CKD across European countries despite using age- and sex-standardization. We hypothesize that the variation can be contributed to both true variation and to methodological differences.

In Part 2 we present research on outcomes in patients with CKD. Across cohorts with CKD patients attending outpatient nephrology clinics, we found a marked variation, particularly in mortality risk. A possible explanation could be differences in regional population health and in healthcare systems.

In conclusion, this thesis suggests that both the prevalence of CKD and the outcomes of patients with CKD vary across European countries. The magnitude and cause of the variation still needs further investigation.
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Promotiecommissie:

Promotores:  Prof. Dr. K.J. Jager, Universiteit van Amsterdam  
Prof. Dr. A. Abu-Hanna, Universiteit van Amsterdam

Copromotor: Dr. V.S. Stel, Universiteit van Amsterdam

Overige leden: Prof. Dr. J.J. Homan van der Heide, Universiteit van Amsterdam  
Prof. Dr. A.E. Kunst, Universiteit van Amsterdam  
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