

Recent epidemiological data on cardiorenal disease in diabetes

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The persistent high incidence and prevalence of dialysis ESRD is still a big issue in Taiwan. However, the trends of incidence and prevalence become flatten after age standardization, which indicates a significant contribution of elderly dialysis population to the growth of ESRD. Similar trend is also noted in both the incidence and prevalence in DM. Diabetes still has a 45-47% contribution to incident ESRD population in these years. Aged, diabetes, acute kidney injury, and/or AKI on CKD are the most common encountered situations in CKD care before entering dialysis, Diabetes with multi-systemic comorbidities is the most difficult clinical situation to be cared, especially combined with cardiovascular comorbidity and complication.

Diabetes is known to be associated with CKD and CVD independently. Among the recent defined cardiorenal syndrome (CRS), type 2 CRS is characterized by primary renal failure that progressively leads to cardiac dysfunction. Diabetes is also a well-established risk factor for CVD, and a significant proportion of diabetic patients eventually develop clinically significant nephropathy. Therefore, CVD, CKD, DM could intervene with each other in clinical care. We created a new term called C-K-D to represent the situations of clinical conditions in these three diseases.

It is hard to clearly define the exact prevalence of C-K-D patient population because of inconsistent definitions, especially in CVD, ethnic, and clinical differences. However, from the Data of Taiwan National Health Insurance, the prevalence of diabetic kidney disease increases from 13.32% in 2000 to 15.42% in 2009, and obviously the rate is even higher today due to the better promotion in screening and clinical care. Similar situation can be anticipated in CVD and DM.

Taiwan has launched series of projects for prevention of DM, kidney diseases and care of DM/CKD patients in the past 20 years, including Diabetes Integrated Care in 2000, Program, Pre-ESRD care project for stage 3b-5 patients in 2007 and Early CKD project for stage 1-3a in 2011. All projects provided patient education and multi-disciplinary care management, which were reimbursed by NHI. Recently, there is a project to include the CVD patients under planning. Definitely, a well collaboration of care among different specialists and professionals is the essential factor for successful care.