

## Diabetic kidney disease: a stepwise approach to combat disease

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The 21<sup>st</sup> century has been marked as the most diabetogenic time phase of human history with an estimation of 380 million diabetics and approximately 418 million prediabetics by 2025 [1,2]. It was against this background that almost a decade back, diabetes had been declared as a public health concern by United Nations and it became the first non-infectious disease to become a health threat globally. An overall increase in number of diabetics worldwide has led to increased incidence of Diabetic Kidney Disease (DKD); a type of kidney disease that is caused by diabetes. Diabetic kidney disease is the major cause of End Stage Renal Disease (ESRD) requiring an extraordinarily high treatment cost [3]. Moreover, DKD not only increases risk of ESRD but also increases susceptibility of Cardiovascular Diseases (CVD). The deadly relationship of diabetes, CVD and ESRD poses high cost of care and also increases risk of all cause and cardiovascular mortality. Recently various studies have shown that diabetic kidney disease patients are more prone to kidney failure and fatality as compared to non-diabetics [4,5]. The higher incidence of ESRD and mortality attributable to DKD has been partly linked to lack of awareness of disease in both general population and diabetic patients. In both population and community based surveys, majority of the patients were unable to identify diabetes as a risk factor for Chronic Kidney Disease (CKD) with only 8.5% to 9.5% patients aware about disease.

The first and foremost step to combat DKD is to overcome notable lack of awareness of disease in both healthy and diseased patients. Secondly, it is extremely crucial to detect DKD at its early stage to delay or even halt progression of kidney

damage. Strategies for early diagnosis of DKD include simple and cost effective assessment of albuminuria and creatinine levels screening in all diabetic patients at regular intervals. The widespread implementation of these laboratory tests at primary care level will help early identification and monitoring of disease. After diagnosis of DKD, the next milestone is management of both diabetes and kidney disease by combination of pharmacological therapies. Fortunately, there is well reported evidence that supports the fact that therapeutic interventions delays disease progression, prevents complications and improves patient outcomes. The treatment of DKD does not only revolve around control of blood sugar level and kidney disease but also incorporates management of comorbidities majorly including CVD and hypertension. DKD causes CVD by both augmentation of traditional risk factors (hypertension, hyperglycemia, dyslipidemia) of CVD and specific kidney disease related mechanisms (anemia, bone mineral disorder). The fifth step in management of DKD is incorporation of lifestyle and dietary changes. An active lifestyle with healthy diet is a key to ensure optimum blood sugar levels and prevention of obesity. With respect to DKD, in addition of control of diabetes, it is extremely crucial to balance proteins and fats to prevent exacerbation of proteinuria and hyperlipidemia; both of which are major risk factors of CVD.

The above mentioned step wise approach to combat DKD is clear. However, the need of the hour and real challenge lies in global implementation of these steps from primary to higher levels of health care system. It is now the time to control potentially preventable diabetes pandemic that is the major risk factor of DKD.

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