



## Cardiovascular Disease in Chronic Kidney Diseased Old Aged People

Ju Xu \*

Department of Cardiology, Longyan University, Longyan, People's Republic of China

### DESCRIPTION

To understand the aging effects on cardiovascular system which leads to cardiovascular diseases many scientists have pinpointed risk factors that increase the causes for a person to develop cardiovascular disease. Scientists gave more information about how physical activity, diet, and other lifestyle factors influence the rate of aging in the healthy heart and arteries. The aging of other organ systems, including the muscles, kidneys, and lungs, also likely contributes to heart disease. Research is ongoing to unravel how these aging systems and aging is linked to cardiovascular disease so that scientists can develop cure for this group of diseases. The link between chronic kidney disease and cardiovascular disease has long been established. This association was first suggested by Richard Bright in the early 19th century and has been substantiated in the intervening years. However, the subject has been gaining more attention in recent years. Chronic kidney disease has been termed cardiovascular risk equivalent, hence chronic kidney disease is an independent risk factor for cardiovascular disease. Cardiovascular disease is higher in chronic kidney disease patients compared with the general population, the higher the chronic kidney disease stage, the higher the cardiovascular disease risk in old aged people. Cardiovascular disease has been found to be the major cause of mortality and significant contributor to morbidity in chronic kidney disease patients and it enhances the rapidity of progression of chronic kidney disease in such patients. Chronic kidney disease patients are more likely to succumb to cardiovascular disease than the chronic kidney disease itself. In spite of these well-established facts, the prevention, diagnosis and treatment of cardiovascular disease in chronic kidney disease can leads to failure of both organs. Many studies have shown that correction for the risk factors (both traditional and novel) did not counteract the effect of chronic kidney disease on cardiovascular disease risk.

The worldwide incidence and prevalence of chronic kidney disease continue to soar. Global prevalence of chronic kidney disease has been estimated to be between 11% to 13% of the world population. The traditional and nontraditional risk

factors in chronic kidney disease predispose the patients to high cardiovascular complications. The high occurrence of cardiovascular disease in chronic kidney disease patients requires careful assessment of possible risks, with the hope of mitigating the burden of the disease and its attendant consequences. Some of the numerous possibilities suggested for the wide distribution of cardiovascular disease in chronic kidney disease patients include: Ageing population, increasing prevalence of hypertension and type 2-diabetes, low detection rate, treatment inertia and reluctance in the early stages of chronic kidney disease. The risk factors for cardiovascular disease in chronic kidney disease patients have been broadly divided into traditional and nontraditional risk factors. These risk factors have synergistic effect and speeds up the process of atherosclerosis and evolution of chronic kidney disease. It is important to accurately evaluate these risk factors with the ultimate aim of reducing the disease burden and minimizing complications.

The traditional risk factors for cardiovascular disease are risk factors for chronic kidney disease and are therefore common in chronic kidney disease patients. Examples include: Increasing age, hypertension, dyslipidemia, diabetes, smoking and obesity. They contribute in no small measure to the initiation of cardiovascular disease in the early chronic kidney disease stages and in turn worsen chronic kidney disease progression.

The non-traditional or 'novel' risk factors are 'uremia specific', or at least much more common in patients with chronic kidney disease than in the general population. These include albuminuria, anemia, hyperparathyroidism, metabolic bone disease, hyper homocysteinaemia, hyperuricemia malnutrition, apo lipoprotein isoforms, inflammation, endothelial dysfunction and oxidative stress.

Chronic kidney disease develops over a relatively long period of time with a significant asymptomatic period in between. Hence the utility of biomarkers for early identification of the disease stage and its attendant consequences is necessary. The use of biomarkers however, has not been without criticisms.

**Correspondence to:** Ju Xu, Department of Cardiology, Longyan University, Longyan, People's Republic of China; E-mail: bekvam@sykehusetnlandet.no

**Received:** 27-Apr-2022, Manuscript No. JASC-22-16770; **Editor assigned:** 29-Apr-2022, Pre QC No. JASC-22-16770 (PQ); **Reviewed:** 13-May-2022, QC No. JASC-22-16770; **Revised:** 20-May-2022, Manuscript No. JASC-22-16770(R); **Published:** 27-May-2022, DOI:10.35248/2329-8847.22.10.275.

**Citation:** Xu J (2022) Cardiovascular Disease in Chronic Kidney Diseased Old Aged People. J Aging Sci. 10:275.

**Copyright:** © 2022 Xu J. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Renal biomarkers of note include cystatin C and serum creatinine which have been used to assess and predict renal function. Other notable markers of renal function include urine albumin, uric acid, and microglobulin. Various novel biomarkers have also been suggested to improve risk assessment and early identification of kidney injury.

Albuminuria has been considered a prognostic marker for cardiovascular disease, with or without renal involvement.

Higher levels of albuminuria indicate a graded increase in risk for mortality independent of estimated glomerular filtration rate. Low estimated glomerular filtration rate and higher albuminuria has been linked with cardiovascular disease. Hence there is need for regular assessment of albuminuria in chronic kidney disease patients.