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COMMENTARY

Chronic kidney disease - The 'neglected' Non-Communicable Disease in Ghana

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Non communicable diseases (NCDs) have been of great concern lately because of the increasing morbidity and mortality. NCDs are disease conditions that affect people over a long period of time for which there are no known causative agents transmittable from one individual to another. According to the World health Organization (WHO) there are four major categories which include cardiovascular diseases (eg. heart attacks and strokes), malignancies, chronic respiratory diseases (chronic obstructive pulmonary disease and asthma) and diabetes[1]. NCDs account for 63% of all deaths worldwide, about 80% of these deaths occur in low and middle income countries including Ghana, with a quarter occurring in persons less than 60 years of age[1]. Since this age group are the working force, productivity and economic growth is reduced by 0.5% for every 10% rise in mortality[2]. NCDs are mostly preventable when risk factors are addressed.

Despite the attention given to non-communicable disease worldwide and in developing countries, chronic kidney disease and its complications, also with high mortality and poor quality of life, is not highlighted[3]. Although chronic kidney disease is an NCD itself, it also complicates most NCDs and deserves attention if we are to win the war on morbidity and mortality in NCDs.

Chronic kidney disease has increasing incidence and prevalence[4]. Globally, prevalence is between 8%-16%.[5,6] The prevalence in Africa is estimated to be 13.9% in a meta-analysis in 2014[7]. The prevalence of chronic kidney disease in Ghana is currently unknown but there is anecdotal evidence of an increase in hospital admissions and mortality related to kidney diseases in Ghana. It was shown in an unpublished single centre study that mortality from kidney disease in a year were up to 50% of renal admissions.

The major causes of chronic kidney disease worldwide are diabetes mellitus, hypertension and chronic glomerulonephritis in that order. In Ghana, chronic glomerulonephritis was found to be the most common cause of chronic kidney disease followed by diabetes and hypertension in a single centre study.[8]

Diabetes mellitus, which is clearly highlighted as an NCD is the most common cause of chronic kidney disease worldwide. Chronic kidney disease complicates 36% of diabetes mellitus type II patients[9]. Diabetes mellitus is however the second most common cause of chronic kidney disease in Ghana[8]. In Ghana, the age adjusted prevalence of diabetes in 2002 was 6.4% in a community based study[10] which is less than the estimated prevalence of chronic kidney disease in Africa[7].

The prevalence of hypertension in Ghana varies from 4.5% - 54.6%[11] with the highest among urban dwellers[12]. In Ghana, almost half of hypertensive patients have chronic kidney disease.[13] This accounts for increased mortality among hypertensive patients as a common complication. The increase in non-communicable diseases due to lifestyle changes as well as communicable diseases in developing countries make the disease burden higher than in developed countries.[14]

Obesity is also a known cause and risk factor for the development of kidney disease. According to WHO, about 13% of the world's population are obese. Obesity has dramatically doubled since 1980. It is increasing in Ghana due to improving economic status, poor dietary habits and lack of exercise. Prevalence of obesity in Ghanaian adults ranges from 5.5% to 23.4%[15]. It causes chronic kidney disease by hyperfiltration injury which leads to focal segmental glomerulosclerosis. Focal segmental glomerulosclerosis is the most common glomerulonephritis causing end stage renal disease in Ghana.[16]

Communicable diseases can also be complicated by chronic kidney disease. These include common viral infections such as human immunodeficiency Virus (HIV), hepatitis B and hepatitis C and some bacterial infections such as streptococcus. These infections are associated with glomerulonephritis which was noted as a common cause of chronic kidney disease in Ghana[8].

Furthermore, people in developing countries including Ghana use a lot of herbal medication for the treatment of medical conditions as an alternative to orthodox medicines. Herbal medicines are perceived wrongly by many to be "natural" and therefore safer than orthodox medicines though the safety profile of most herbal medications are unknown. The use of herbs is associated with hypertension, chronic kidney disease, chronic interstitial nephritis, renal papillary necrosis and even urothelial carcinomas.[17] There is anecdotal evidence that herbal medicine usage worsens the already precarious prevalence of kidney disease in developing countries but concrete studies to prove that are currently lacking in Ghana.

Chronic kidney disease foretells worse prognosis for both acute and chronic medical conditions. It is therefore very sad that the Ghana Ministry of Health's document on strategy for the management, prevention and control of chronic non-communicable diseases and the Facts and Figures document of the Ghana Health Service fails to mention an important condition such as chronic kidney disease. This is because most district hospitals (where most of the data is culminated from) do not have adequate capacity and laboratory services to appropriately diagnose chronic kidney disease. This leads to end stage renal disease in the long run with increased mortality.

Management of end stage renal disease is very expensive and most patients cannot afford renal replacement therapy[18]. Recognised forms of renal replacement therapy worldwide are transplantation, peritoneal dialysis and haemodialysis. Transplantation has been shown to be cheaper with improved survival and quality of life as compared to peritoneal dialysis and hemodialysis[19]. Unfortunately, Ghana has no existing national renal transplantation programme. There are very few haemodialysis machines and nephrologists in Ghana currently with skewed distribution to five regions in Ghana.[20] Most patients after diagnosis are left to their fate when they are unable to afford haemodialysis. The National Health Insurance Scheme (NHIS) does not cover acute or chronic haemodialysis. The few patients who can start, cannot maintain regular sessions. In a single centre study in Accra, 63.3% of end stage renal disease patients started on haemodialysis could afford less than 5 sessions due to increased cost of haemodialysis.[21] This leads to a high mortality on hemodialysis. The 90-day and one-year mortality was 32.5% and 35.9% respectively in a single centre study.[22] Patients on haemodialysis also have very poor quality of life[3].

With the estimated increase in the prevalence of chronic kidney disease and its complications, high cost of haemodialysis, presence of very few nephrologists ,unavailability of a transplant program in Ghana and a lack of substantial governmental support, a concerted effort is needed to recognise kidney disease as an important NCD and also manage the condition [23]. There should be awareness creation for renal disease prevention in Ghana and the possible set up of a Kidney Disease Control Program to aid diagnosis, management and good data collection in peripheral hospitals to tackle the growing burden of chronic kidney disease.

As we celebrate world kidney disease this year with the focus on kidneys and women health, we also hope to promote affordable and equitable access to kidney health education, kidney care and prevention of kidney disease among girls and women in Ghana and the world at large.

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