

Kidney health risk of migrant workers: An issue we can no longer overlook

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The burden of kidney disease-related morbidity and mortality in the general population is rising [1, 2]. Recent data suggest that 1.2 million people worldwide lost their lives from Chronic Kidney Disease (CKD) in 2017 [1]. The global prevalence of CKD was estimated between 11% to 13%, according to a 2016 review [2]. There exists a specific population group of low-skilled migrant workers in the countries of the Gulf and Malaysia, who could be at a disproportionately higher risk of kidney health problems [3]. The working conditions often called as 3Ds (Dirty, Dangerous and Difficult) of these blue-coloured workers, such as physically demanding work, exposure to a hot environment, dehydration, chemical exposures, excessive use of pain killers, and lifestyle factors (such as less water intake, high intake of alcohol and sugary drinks) may precipitate them to acute kidney injuries and subsequent CKD [3-7]. Anecdotal reports in Nepal also suggest a higher risk of kidney failure among returnee migrant workers [8, 9]. It is difficult to ascertain the prevalence of CKD for these migrant workers of their country due to the lack of a national registry or surveillance system. However, a systematic review including population-based studies of India, Nepal, Bangladesh, and Pakistan (labour migrant-sending countries to the Gulf and Malaysia) and using the Modification of Diet in Renal Disease (MDRD) equation estimated the prevalence of CKD between 10.6% (Nepal) to 23.3% (Pakistan) [10].

Kidney problems are beginning to emerge in studies as the major problem in migrant workers. For example, a hospital-based study among 44 Nepali returnee migrant workers treated for CKD found that 70.5% were involved in manual or semi-manual work in the Gulf countries and Malaysia, 70% worked more than 60 hours per week, and the cause for CKD was unknown for 77.3% [11]. A longitudinal study among 65 Indian construction workers in Saudi Arabia reported that 18% suffered kidney injury. The study suggested exposure to heat, long working hours, dehydration, sleep deprivation, and obesity as risk factors [7]. In Indonesia, 18% of patients with chronic renal failure were former migrant workers [6]. A qualitative study among Indonesian migrant workers with CKD reported unhealthy eating habits, high alcohol intake, and soft drinks [4]. A systematic review showed that 15% of individuals working in extreme heat had kidney problems [12] and the environmental working condition for thousands of low-skilled labour migrants, suggesting a hidden population of people with (potential) kidney problems. It is clear that further focused studies are required, which requires research funding and commitment from policy-makers (in sending and receiving countries), migrant support organisations, and labour agents.

Several key factors are contributing to the prevalence of CKD among migrant workers. Although there is limited evidence on kidney health-related risk among migrant workers, there is considerable evidence on the markedly higher risk of CKD among migrant and non-migrant farmworkers in Central America and South Asia [13-17]. A Sri Lankan study among 30,566 patients showed that farmers were the most affected occupational group [18]. The working conditions of these farmworkers and among low-skilled migrant workers in the Gulf countries and Malaysia are very similar, such as exposure to heat, long working hours, and limited opportunity for rest and hydration. As for the case of migrant workers, these farmworkers also do not always present with the commonly known risk factors of CKD (such as diabetes, hypertension), and thus this condition is termed as 'Mesoamerican nephropathy' or CKD with unknown aetiology (CKDu) [19]. There is no clear evidence on the aetiology of CKDu. However, there is a growing consensus that occupational and environmental factors individually or combinably may trigger kidney health risk in migrant workers in Gulf and Malaysia, linked to both work and lifestyles [3].

For countries like Nepal, labour migration is the best possible livelihood option for many of its

population. Nepal has issued over 4 million labour permits since 2008 for work-related employment, mainly in the countries of the Gulf and Malaysia [20]. Nearly half of Nepali households have had at least one migrant member in the last decade [21]. According to the Nepal Labour Migration Report 2020, Nepali migrants sent over US 8.8 Billion Dollars of remittance in the year 2018/19 [20]. Unfortunately, such financial gains to the migrants, their families, and the country come with the cost of health issues like kidney health problems which are very difficult to manage in low-income countries like Nepal. The services for treating kidney-related problems are expensive in associated medical cost and limited in number, especially during the end-stage renal disease (ESRD) [18, 22, 23]. A study in Nepal showed that out-of-pocket expenses for hemodialysis are US dollars 209 per month, and 78% of patients on regular dialysis faced catastrophic health expenditure, pushing them towards poverty [24]. It has even more crucial financial implications for migrant workers and their families as they are usually among the poorest in society.

In 2019, four of the authors (NA, PR, EF, EvT) carried out a patient-public involvement (PPI) workshop in Malaysia on kidney health issues of Nepali migrants [3]. They identified possible risk factors contributing to kidney problem among the participants in the workshop. In many factories in Malaysia, there was a fixed schedule for toilets or drink to avoid disruption in their work pattern. They argued that security guards drink little water to avoid needing the toilets because replacement guards are not available, and many workplaces do not provide drinking water. Also, the workshop participants informed that Nepali migrants work continuously for several weeks without a day off, use a high dose of painkillers and drink a high amount of alcohol (including locally brewed possibly hazardous or counterfeits). It is worth mentioning that migrant workers could have been exposed to these risky lifestyle habits pre-migration, especially alcohol intake and smoking.

In 2019/2020, we conducted an online survey with 38 Nepal-based nephrologists (out of 51 in the country at that time) on kidney-related problems of returnee migrant workers (submitted for publication). The majority of participating nephrologists reported that Nepali migrant workers are at a higher risk of kidney problems than the general population in the country. The causes of kidney problems of returnee migrant workers were of unknown aetiology and less likely to be linked to traditional risk factors, such as hypertension, diabetes, and lifestyle (especially diet and alcohol intake).

In light of the scarce scientific evidence, neither labour migrants sending and receiving countries, employers, migrant-related organisations, nor migrants themselves have realized the burgeoning burden of kidney health risk. There was generally underestimation of simple/basic preventive measures due to a lack of awareness of the problem [25]. Therefore, there is an urgent need to raise kidney health awareness, especially among vulnerable population groups such as migrant workers. We strongly feel that the growing scientific basis justifies further investigation. As a starting point, we should carry out epidemiological studies to establish the relative size and determinants of kidney health risk of low-skilled migrant workers. For example, we need an accurate assessment of kidney health risks and related occupational health risks in destination countries and returnee migrant workers. We urge relevant health researchers (especially from labour migrant-sending and receiving countries) and migration/health research-related funding bodies to pay urgent attention to this issue.

Conflicts of interest

There are no conflicts of interest.

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