Chronic kidney disease (CKD) is increasingly recognized as a global public health problem and is highly linked with nutritional derangements. Malnutrition is one of the most serious complications of CKD and its consequences, particularly for patients on hemodialysis as well as on continuous ambulatory peritoneal dialysis, are devastating in terms of quality of life, morbidity, hospitalization and mortality. Screening of malnutrition among CKD patients is one of the important aspects for raising awareness about associated complications and medical cost.

OBJECTIVES

To evaluate the prevalence of malnutrition among chronic kidney disease patients (Hemodialysis, Peritoneal-dialysis & Non-dialysis) globally and its contrast with India.

RESULTS

A total of 21119 samples from 61 studies were potentially eligible for quantitative analysis.

The global prevalence of malnutrition associated with CKD was found to be 42.7%. The prevalence of malnutrition in peritoneal dialysis group was found to be (45.3%, 95% CI; 29.5-62.1) higher as compared to hemodialysis group (43.1%, 95% CI; 32.2-54.7) followed by non-dialysis group (38.5%, 95% CI; 24.0-55.3).

The males (20.7%) were predominantly affected with malnutrition as compared to females (16.4%). The prevalence of malnutrition in India was found to be 56.7% (95% CI: 42.4-70.0%). Globally, India occupies the highest share of prevalence studies 14.75% followed by Brazil 8.19%.

The geographical stratification of results revealed that developing areas where economies are growing such as Mexico (73.7%), Jordan (61.7%), and India (56.7%) had higher rates of CKD associated malnutrition prevalence in comparison to areas which are developed such as Australia (19.7%), Europe (18.2%) etc. Meta-regression analysis showed a region and gender based prediction of malnutrition.

CONCLUSIONS

In conclusion, the geographical stratification of results revealed that the highest prevalence of malnutrition was observed in India except Mexico and Jordan. Given the high prevalence of malnutrition among CKD patients, evaluation of interventions for malnutrition with patient centered outcomes are warranted.

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