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Coming to grips with chronic kidney disease

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The 2002 classification of renal dysfunction as chronic kidney disease (CKD) independent of the underlying cause—with 5 stages based on glomerular filtration rate estimates—was an important advance in the diagnosis and management of progressive kidney disease.[1] Subsequent reports from a number of countries, including Australia and the USA,[2] have documented a CKD prevalence in excess of 12% in their populations although some have questioned the validity of these estimates.[3] No national study has been undertaken in New Zealand and there is no national CKD surveillance programme under consideration as has been proposed elsewhere.[4]

Joshy et al in this edition of the *Journal* report on the prevalence of CKD stages 3–5 in a cohort of primary care patients with diabetes.[5] They used the older Cockcroft-Gault and newer MDRD formulae to estimate GFR utilising the serum creatinine measurement and demographic measures.

They found differences in CKD estimates, as have others,[6] emphasising the imprecision of these screening tools. Some of this imprecision, particularly in stage 3 CKD, will be addressed by the future introduction of newer formulae such as the CKD-EPI formula which has been validated in a large US population.[7] Nevertheless a degree of imprecision will remain, but is clinically tolerable, given that the role of a screening tool is to focus strategies of diagnosis and therapy.

The simplest way to identify kidney injury is to estimate the degree of albuminuria. Recent large longitudinal studies have shown that the presence of albuminuria is an important prognostic factor for CKD progression, cardiovascular events and mortality.[8]

After considerable international debate[9] a recent Nephrology Consensus Conference held in 2009 determined that levels of albuminuria will be part of a reclassification of CKD likely to be promulgated by the International Renal Guideline Group KDIGO in the near future.[10]

Joshy et al found the presence of albuminuria in 51% of Māori with diabetes suggesting a high level of kidney injury present in this ethnic group. This prevalence of kidney injury signals the inevitability of a high future incidence of end stage kidney failure, other serious comorbid events and premature mortality.[11] There is already a 14-fold higher incidence of diabetic end stage kidney disease amongst Māori compared to those of European origin.[12]

While it is well established that effective antihypertensive therapy, particularly utilising blockers of the renin angiotensin aldosterone system, targeting a blood pressure (BP) of <130/80 mmHg is associated with a reduction in progression of CKD and reduction in the incidence of CVAs and cardiovascular events,. these targets were achieved in <30% of patients in the study by Joshy et al. When proteinuria exceeds 1

gram/24 hours the recommended target BP is even lower at 125/75 mmHg[13] and fewer patients still will be achieving that goal.

Effective innovative strategies to improve BP management in this population are urgently needed if we are to reduce the high mortality and comorbid event rates. Such approaches will require a shift in the standard paradigm of consultation-based health care with a strong emphasis on finding ways to ensure that BP targets are being consistently achieved in most patients. While screening strategies need to be broadly focused there is a need to tailor management to individual patient circumstances and clinical need.

Changes from the current approach could include more frequent clinic visits, practice nurse community contact and visits, wider utilisation of home BP monitoring, a closer relationship with pharmacies to ensure medications are being accessed appropriately, a closer collaborative partnership between primary health care and the DHB Diabetes and Renal Specialist Services along with a renewed focus on the importance of lifestyle modification with an emphasis on minimising salt intake to optimise BP control.

Business as usual will not address these important issues.

Competing interests: None known.

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