Chronic kidney disease

Recently the College distributed a new set of guidelines: 'Promoting good CKD management'.[1] Raising awareness of chronic kidney disease (CKD) is a good thing as CKD often goes unrecognised in primary care.[2] People with CKD are at higher risk of cardiovascular disease and all cause mortality is also increased.[3–5] Strict control of blood pressure improves outcome,[6] angiotensin-converting enzyme inhibitors (ACE-I) and angiotensin receptor blockers (ARB) are particularly effective.[7]

There are two points in the guidance which need careful consideration. Firstly it may be unhelpful to a glomerular filtration rate (GFR) of 100ml/min/1.73m^2 as normal. Secondly, it may not be cost-effective to require the 6% of the population, who with the advent of reporting estimated GFR have been newly been diagnosed as having CKD (eGFR<60ml/min/1.73m^2), to all have a parathyroid hormone (PTH) tests.

While the mean GFR in adult kidney donors up to age 40 years has been reported normally distributed with a mean of 100ml/min/1.73m^2 (SD = 15)[8] the population in general practice who have their creatinine measured, and therefore GFR estimated, may be unwell or being tested as part of a chronic disease management programme.

In a registered GP population of approximately 50 000 people 26% (28% women and 22% men) had their GFR estimated. The mean eGFR for was men 75.6ml/min/1.73m^2 (SD = 19.0) and for women 69.2 ml/min/1.73m^2 (SD = 20.2). Only males aged 20–24 years have a mean eGFR at the 'normal' level quoted; and a majority of women over 75 years and men over 80 years have eGFR <60ml/min/1.73m^2. However, loss of renal function with age is largely attributable to hypertension; CKD should be treated with aggressive risk factor reduction regardless of age.[9]

Only 13 women and three men in the sample have a record of having their PTH tested. PTH tests cost between £12 and £18; and it is recommended that if PTH is raised a vitamin D blood test, costing a further £10 to £19, is carried out. Before everyone with newly diagnosed CKD (eGFR <60 ml/min/1.73m^2) is sent for a PTH tests, careful appraisal is needed of the evidence-base for these tests. The potential benefit of early detection and treatment is that hyperparathyroidism is associated with low vitamin D levels,[10] which, in turn, predisposes to poor bone mineral density and fractures.[11] These changes may be amenable to reversal by the administration of calcium and vitamin D. However, there is limited evidence that early detection of renal osteodystrophy in people with stable moderate CKD improves outcome.[12]

In summary, GPs should expect that around 6% of their practice population (8.5% of women and 4% of men) to have CKD. While disturbance of bone and mineral metabolism offers an avenue for intervention in terms of improving biochemical markers, further research is needed to know whether outcomes are improved in this group. A pragmatic approach would be to measure PTH in all new diagnoses of stage 4 and 5 CKD (eGFR <30ml/min/1.73m^2) and in stage 3 (30–59ml/min/1.73m^2) where deteriorating renal function leads to referral. Meanwhile management of cardiovascular risk in CKD should remain paramount. GPs should concentrate on tight control of blood pressure, ideally using ACE-I or ARB and conduct medication reviews as suggested in this guidance.

Simon de Lusignan
Senior Lecturer and part-time GP
St. George's Hospital Medical School
E-mail: slusigna@sghms.ac.uk

REFERENCES

1. Blades S, Burden R. Introducing eGFR. Promoting good CKD Management. CKD Guidelines Development Committee. http://www.renal.org/eGFR/resources/eGFRnatInfoLflt0406.pdf (accessed 18 Oct 2006).
2. De Lusignan S, Chan T, Stevens P, *et al*. Identifying patients with chronic kidney disease from general practice computer records. *Fam Pract* 2005; **22**(**3**): 234–241.
3. Tonelli M, Wiebe N, Culleton B, *et al*. Chronic kidney disease and mortality risk: a systematic review. *J Am Soc Nephrol* 2006; **17**(**7**): 2034–2047.
4. Go AS, Lo JC. Epidemiology of non-dialysis-requiring chronic kidney disease and cardiovascular disease. *Curr Opin Nephrol Hypertens* 2006; **15**(**3**): 296–302.
5. Perazella MA, Khan S. Increased mortality in chronic kidney disease: a call to action. *Am J Med Sci* 2006; **331**(**3**): 150–153.
6. Wenzel RR. Renal protection in hypertensive patients: selection of antihypertensive therapy. *Drugs* 2005; **65** Suppl 2: 29–39.
7. Ravera M, Re M, Deferrari L, *et al*. Importance of blood pressure control in chronic kidney disease. *J Am Soc Nephrol* 2006; **17** (4 Suppl 2): S98–103.
8. Grewal GS, Blake GM. Reference data for 51Cr-EDTA measurements of the glomerular filtration rate derived from live kidney donors. *Nucl Med Commun* 2005; **26**(**1**): 61–65.
9. Lindeman RD, Tobin JD, Shock NW. Hypertension and the kidney. *Nephron* 1987; **47** Suppl 1: 62–67.
10. Gonzalez EA, Sachdeva A, Oliver DA, Martin KJ. Vitamin D insufficiency and deficiency in chronic kidney disease. A single center observational study. *Am J Nephrol* 2004; **24**(**5**): 503–510.
11. LeBoff MS, Kohlmeier L, Hurwitz S, *et al*. Occult vitamin D deficiency in postmenopausal US women with acute hip fracture. *JAMA* 1999; **281**(16): 1505–1511.
12. The Renal Association. *Chronic kidney disease in adults. UK Guidelines for identification, management and referral.* Joint Specialty Committee on Renal Medicine of the Royal College of Physicians of London and the Renal Association 2006: p67. http://www.renal.org/CKDguide/full/CKDprintedfullguide.pdf (accessed 18 Oct 2006).

Ever been HAD?

Tony Kendrick[1] has produced some evidence that shows that the use of the Hospital Anxiety and Depression Scale can lead to more selective prescribing of antidepressants. This does not surprise me at all, and if he reads my column[2] again, he will find that nowhere do I suggest that the use of scales 'will encourage antidepressant prescribing'. My concerns are more profound than the simple issue of the level of prescribing, and I think they are worth re-iterating, especially since Tony was involved in developing the Quality and Outcomes Framework (QOF) mental health indicators and has not responded to the deeper thrust of my opinion piece.

Put briefly, I have two points to make, one specific to the management of depression, the other more general. Specifically, I fear that the routine use of depression scoring scales will detract from the human interaction between doctor and patient that is so vital to the consultation, especially when approaching emotional and psychological issues. To provide evidence for and against this proposition would require a far wider remit than the one used in Professor Kendrick's study, and might be almost impossible. Unless and until such evidence is available, I strongly believe that individual GPs should be allowed to follow their own approach to management, which may or may not include the (selective) use of quantitative screening instruments.