Cardiorenal Forum 2nd Scientific Meeting

The Second Scientific Meeting of the Cardiorenal Forum (CRF) was held recently at the Royal Pharmaceutical Society in London. This well-attended meeting highlighted the growing interest in this area. Here, the meeting organisers, Drs Paul Kalra, Philip Kalra and Henry Purcell, report highlights of the varied presentations made during the day.

CARDIORENAL FORUM

The Tsars' view

Chronic kidney disease (CKD) is "common, harmful and treatable", in the words of Dr Donal O'Donoghue, the UK's National Director for Kidney Services. Surveys have indicated that as many as 16% of the adult population have some marker of kidney disease and it is estimated that over three million people in the UK are under threat from CKD. Over 13,000 die annually from conditions affecting the kidney and almost half of all CKD deaths are from cardiovascular causes.

CKD is largely a disease of the elderly but some ethnic groups have particularly high rates. In a typical GP practice of 10,000 patients, about 380 OF of these will have stage 3 CKD, 60 will have stage 4 CKD and six will have stage 5 CKD.

The management of CKD is part of the National Service Framework (NSF) for Renal Services and the condition was added to the Quality and Outcomes Framework (QOF) for primary care in the UK in February 2006. Guidance from the National Institute for Health and Clinical Excellence (NICE) is "in the incubator", according to Dr O'Donoghue. He believes there is "an educational gap in primary care" due perhaps to confused messages, often relating to multiple terms in use, such as chronic renal insufficiency, or pre-end stage renal disease, which are competing with other messages, such as 'epidemics' in cardiovascular disease, diabetes and now CKD. GPs – who receive an estimated 220 sets of guidelines every year – are likely to have to "shoulder the burden" of the problem in times ahead, and he said that "it is a bit too soon to tell" what impact the NSF has had so far.

The National Director for Heart Disease and Stroke, Professor Roger Boyle, reminded the meeting of the overlap and commonality in vascular diseases (affecting about 6.2 million people), which include coronary heart disease (CHD), diabetes, stroke and CKD, with some 30,000 in receipt of renal replacement therapy (renal dialysis or transplant). Things are improving, however, he said, as the UK is no longer the CHD "capital of the world". We are now out of our "disease silos", said Professor Boyle, and better prevention, more systematic detection and management of risk factors and more effective treatment (including intervention) is the appropriate way to manage vascular disease patients. It was practice nurses, he said, not cardiologists who have been "the heroes of the day" in terms of implementing these changes.

The GPs' view

Dr Ian Wilkinson (a GP representative on the NSF for Renal Services, and Clinical Champion for Oldham PCT), reminded delegates of the NSF quality requirements, which underline not only the need for early prevention and detection of CKD but also the need to minimise its progression and consequences.

"Timely referral can avoid harm" in CKD patients, said Professor Mike Kirby, (University of Hertfordshire, and a Letchworth GP). Most stage 3 CKD patients die of cardiovascular disease and not of kidney failure. Urgent referral is needed, irrespective of glomerular filtration rate (GFR), if the patient develops accelerated hypertension, hyperkalaemia, nephrotic syndrome, or proteinuria/haematuria. Once proteinuria develops, "life becomes more risky", he said, so it is important to slow its progression by renin-angiotensin-aldosterone system blockade and rigorous control of blood pressure and cholesterol to further reduce cardiovascular risk. Renal-specific factors, such as bone disease and renal anaemia, should also be addressed.

The consultants' view

Dr David Goldsmith, (Consultant Nephrologist, Guy's Hospital, London), provided a nephrologist's view of the ubiquitous problem of arterial calcification in CKD. Extensive calcification of the arterial wall and soft tissues, which appears to be related to disturbances in bone and mineral metabolism, is a frequent feature in advanced CKD patients, he said, particularly in those on dialysis. Hyperphosphataemia has been shown to be associated with this process and a range of new phosphate-binding drugs are among those which may become crucial in reducing cardiovascular events in CKD patients.

Arterial calcification results in increased large vessel stiffness, left ventricular hypertrophy and impaired coronary perfusion. It also poses a particular problem during percutaneous coronary intervention (PCI) and stenting, as outlined by Dr Nick Curzen, Consultant Interventional Cardiologist, Wessex Cardiac Centre, Southampton, who reviewed its difficulties and complications, with the understatement that interventional cardiologists "don't really like calcium very much"!

Iatrogenic complications can be caused even in the comparatively uncomplicated setting of diagnostic coronary angiography. Contrast-induced nephropathy (CIN), which was reviewed by Dr Charles Knight, Consultant Cardiologist, London Chest Hospital, is the third most common cause of hospital-induced acute renal failure, accounting for 10% of cases. While the decline in renal function is mild and transient in most cases of CIN, the condition carries significant morbidity and

mortality. Specific measures can be employed in high-risk patients to reduce risk, particularly avoidance of dehydration, Dr Knight stressed.

Other speakers reviewed the underlying process of endothelial dysfunction in vascular disease and specialist challenges in CKD patients who develop myocardial infarction and heart failure, with the major fluid and electrolyte shifts which are often amplified during reno-vascular compromise.

Finding the undiagnosed

The London meeting of the Cardiorenal Forum also touched on the fact that 90% of those with CKD are unidentified, supporting international recommendations (see www.worldkidneyday.org) for targeted screening programmes and the measurement of estimated glomerular filtration rates (eGFR) and proteinuria in those at highest risk of CKD, including all those with diabetes, hypertension, CHD and cerebrovascular disease, who constitute the majority of patients with CKD and with end-stage renal disease.

World Kidney Day (to be held on 13 March 2008) offers a crucial, visible opportunity to inform and educate not only the health policy makers and those at highest risk of CKD, but also the general public. It will be strongly supported by *The British Journal of Cardiology* and the Cardiorenal Forum

***The British Journal of Cardiology* is delighted to be appointed the official journal for the Cardiorenal Forum. The journal will carry regular reports on its activities. For information about future UK and international meetings, see: www.cardiorenalforum.com**