

Dr Colin Hutchinson MBChB, PGA, MRCP, PhD

Senior Research Fellow and Honorary Consultant Nephrologist

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About

Colin Hutchinson is a Senior Research Fellow at the University of Birmingham based in the school of Immunity and Infection. Here he pursues his translational research interests in the fields of myeloma kidney and haemodialysis.

Additionally he holds an honorary Consultant Nephrologist post at the University Hospital Birmingham

Qualifications

- PhD Medical Science University of Birmingham 2009
- PGA Medical Education University of Warwick 2006
- Member of the Royal College of Physicians (UK) 2004
- MBChB University of Leicester 2000

Biography

Dr Hutchinson completed his undergraduate training in medicine at the University of Leicester and his PhD at the University of Birmingham, UK. He currently works at the Renal Institute of Birmingham at the University Hospital Birmingham and the University of Birmingham.

Dr Hutchinson's research interests principally relate to the management of patients with renal failure secondary to multiple myeloma and haemodialysis. He is currently coordinating a European study assessing the removal of free light chains by high cut-off haemodialysis in patients with myeloma kidney and acute renal failure (The EuLITE study). This has followed detailed work on the kinetics of light chain removal in myeloma and acute renal failure. This innovative work has been complemented by other published studies on patients with chronic kidney disease and dialysis.

Dr Hutchinson has helped co-found the International Myeloma Kidney Research Group which endeavours to provide a focus to future research efforts in the field

Teaching

Teaching Programmes

- [Medicine and Surgery MBChB \(/undergraduate/courses/med/medicine.aspx\)](#)
- Post graduate medical and nursing staff

Research

During the last 6 years he has established research programmes in the fields of myeloma kidney and chronic haemodialysis. Additionally he has run research studies in the areas of diabetic nephropathy, chronic kidney disease, transplantation and intensive care.

1. Myeloma Kidney:

He has sought to undertake a multi-faceted approach to improving the management of patients with acute kidney injury complicating multiple myeloma. Focusing on diagnostic aspects of care he identified the safety of renal biopsies in this population (Fish et al, Clin J Am Soc Nephrol 2010) and the utility of immunoassays to provide a rapid diagnosis for these patients (Hutchison et al, BMC Neph 2008). He has then described the importance of achieving an early reduction in serum FLCs to enable renal recovery, this has led to collaborations with the Mayo Clinic and this work is currently in press with J Am Soc Nephrol.

In seeking options to allow this early reduction in FLCs to occur, he described for the first time the removal of FLCs by haemodialysis. This required initial in-vitro and in-vivo studies to optimise the removal of FLCs (Hutchison et al, J Am Soc Nephrol 2007). This was followed by a pilot study of FLC removal by high cut-off haemodialysis (HCO-HD) in patients with myeloma kidney (Hutchison et al, Clin J Am Soc Nephrol 2009) and subsequently a European multi-centre randomised controlled trial, which is currently recruiting (EuLITE). He has gone on to undertake health economic analysis of the potential benefits of this procedure with a research group from Toronto, Canada.

This experience with the management of myeloma kidney has resulted in invitations to speak at international meetings including in 2011: the World Congress of Nephrology, the European Dialysis and Transplantation Meeting and the International Myeloma Workshop. Additionally he has had a first author letter in the Lancet in 2010.

In late 2010 he co-founded the International Kidney and Monoclonal Gammopathy Research Group which brings together for the first time researchers in the field to allow multinational collaborations. To date we have key opinion leaders from the UK, France, Greece, The United States and Spain participating in the group.

Difficult to remove uraemic toxins are associated with cardiovascular disease and early death in the chronic dialysis population. Using his experience of high cut-off haemodialysis he started to explore the use of these membranes for the removal of middle molecules in chronic dialysis populations. He has already completed two pilot studies addressing this question, in this work he has collaborated with Raymond Vanholder's research group in Ghent. This has been complemented by collaboration with Richard Ward from the University of Louisville in a study assessing the removal of middle-molecules by standard high-flux membranes. The output of these studies have allowed our collaborators at the University of Warwick to start to develop mathematical models of uraemic toxins in dialysis patients.

Also in the field of chronic dialysis he has also reviewed the management of heparin induced thrombocytopenia in the UK dialysis population. The survival of dialysis patients in intensive care and has recently secured funding for randomised control trial of a new generation of dialysis catheters

Other activities

- Member of the Renal Associations Education Committee

Publications

Cook M, Gertz MA, Dispenzieri A, Winters JL, Kumar S, Rajkumar SV, Kyle RA, Leung N. Early Reductions in Serum Free Light Chain Concentrations are Associated with Renal Recovery in Myeloma Kidney. In press: J Am Soc Nephrol

Grima DT, Airia P, Attard C, Hutchison CA. Modelled cost-effectiveness of high cut off haemodialysis compared to standard haemodialysis in the management of myeloma kidney. Current Medical Research Opinion 2011; 27 (2): 383-391.

CJ Ferro, NC Edwards, C Hutchison, P Cockwell, RP Steeds, CO Savage, JN Townend, L Harper. Does Immunosuppressant medication Lower Blood Pressure and Arterial Stiffness in patients with Chronic kidney Disease? An observational Study. Hypertension research 2011 (34), 113-119.

Hutchison CA, Pratt G. Light chain monoclonal gammopathy of undetermined significance. Lancet 376 (9748): 1220; 2010

Cockwell P, Hutchison CA. Management options for cast nephropathy in multiple myeloma. Current Opinion in Nephrology and Hypertension Epub 2010

Fish R, Pinney J, Jain P, Addison C, Jones C, Jayawardene S, Booth J, Howie AJ, Ghonemy T, Rajabali S, Roberts D, White L, Khan S, Morgan M, Cockwell P, Hutchison CA. The incidence of major hemorrhagic complications after renal biopsies in patients with monoclonal gammopathies. Clin J Am Soc Nephrol 22: Epub 2010

Basnayake K, Cockwell P, Hutchison CA. Rhabdomyolysis and acute kidney injury. N Eng J Med 361 (14): 1411-2, 2009.

Hutchison CA, Basnayake K, Cockwell P. Serum free light chain assessment in monoclonal gammopathy and kidney disease. Nat Rev Nephrol Epub Sept 2009

