

Mr Nigel E Drury BM(Hons) PhD MRCS

Honorary Clinical Lecturer in Cardiothoracic Surgery

Cardiovascular and Respiratory Sciences

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About

Mr Drury is a Specialist Registrar in Cardiothoracic Surgery on the West Midlands Training Programme and an Honorary Clinical Lecturer at the University of Birmingham.

Qualifications

- PhD in Medicine, University of Birmingham 2012
- Member of the Royal College of Surgeons of England 2004
- Bachelor of Medicine with Honours, University of Southampton 2000

Biography

Mr Drury graduated from the University of Southampton in 2000, was awarded his medical degree with Honours and won three undergraduate prizes including the Sutton Prize for Surgery. He completed Basic Surgical Training in Wessex and the South West before commencing his training in Cardiothoracic Surgery at Harefield Hospital, Middlesex and Papworth Hospital, Cambridge. He also gained experience in congenital heart disease at the Wessex Cardiac Centre in Southampton. He moved to Birmingham in 2007 to undertake his doctoral thesis in myocardial protection during cardiac surgery with Professor Domenico Pagano (Cardiac Surgery) and Professor Michael Frenneaux (Cardiovascular Medicine) and later with Professor Nick Freemantle (Epidemiology & Biostatistics) and Professor Mark Viant (Metabolomics). His thesis entitled 'On perhexiline and its application to myocardial protection during cardiac surgery' was awarded PhD without correction in June 2012.

Mr Drury won the Ronald Edward medal for best scientific presentation at the Society for Cardiothoracic Surgery annual meeting in 2008 and was awarded a Wellcome Trust Value in People award in 2009 to visit Professor John Horowitz and A/Prof Benedetta Sallustio at the University of Adelaide. He was awarded an Overseas Travel grant to present his work at the American Heart Association in 2011 and won the Sankey Research Prize for best presentation at their annual research meeting in 2012.

His main research interests are in congenital heart disease, myocardial metabolism, myocardial protection during cardiac surgery, clinical trials and patient involvement in research. He is working with colleagues in the Department of Cardiac Surgery at Birmingham Children's Hospital to develop and expand research in children's heart surgery.

Teaching

- SCTS University (2011-)
- Specialist Registrars in Cardiology on the West Midlands Training Programme (2008-)
- Specialist Registrars in Cardiothoracic Surgery on the West Midlands Training Programme (2013-)
- Chest drain insertion courses for Junior Doctors (2012-)

Mr Drury has previously taught undergraduates on the MB ChB and BDS courses, examined for the OSCE component of MB ChB course, and supervised research projects for BMedSci and MB ChB students at the University of Birmingham.

Research

Mr Drury's main research interests are in congenital heart disease, myocardial protection during cardiac surgery, myocardial metabolism, clinical trials and patient involvement in research.

Congenital heart disease

Mr Drury is involved in an ongoing study to evaluate long-term outcomes following the Arterial Switch operation for Transposition of the Great Arteries. He is working with colleagues in the Department of Cardiac Surgery at Birmingham Children's Hospital and patient groups to develop and expand research in children's heart surgery.

Myocardial protection

To date, Mr Drury has been involved in three clinical trials of manipulating myocardial metabolism to improve myocardial protection during cardiac surgery. The HINGE (Hypertrophy Insulin Glucose and Electrolytes) trial recruited over 200 patients and demonstrated that glucose-insulin-potassium infusion improved short-term outcomes in patients undergoing aortic valve replacement for aortic stenosis. The CASPER and HYPER trials found that in almost 400 patients, oral perhexiline did not improve myocardial protection during surgery for coronary artery bypass grafting or aortic valve replacement.

Myocardial metabolism

In collaboration with Professor Mark Viant and Dr Ralf Weber in Metabolomics, Mr Drury has used FT-ICR to study the human myocardial metabolome and investigate the effect of perhexiline on myocardial metabolism. Mr Drury is also collaborating with Dr Melanie Madhani (Birmingham) and Professor Michael Frenneaux (Aberdeen) on the effects of nitrite on haemodynamics in patients with heart failure.

Other activities

- NTN Specialist Registrar in Cardiothoracic Surgery in the West Midlands (2010-)
- Member of the British Society for Cardiovascular Research (2009-)
- Member of the Society for Cardiothoracic Surgery in Great Britain and Ireland (2006-)
- Member of the British Congenital Cardiac Association (2005-)
- Member of the Royal College of Surgeons of England (2004-)

Publications

Drury NE, Howell NJ, Calvert MJ, Weber RJM, Senanayake EL, Lewis ME, Hyde JAJ, Green DH, Mascaro JG, Wilson IC, Graham TR, Rooney SJ, Viant MR, Freemantle N, Frenneaux MP and Pagano D on behalf of the CASPER trial investigators (2014) The effect of Perhexiline on myocardial protection during coronary artery surgery: a two-centre randomised double-blind placebo-controlled trial. *Eur J Cardiothorac Surg* (in press)

Drury NE, Licari G, Chong C-R, Howell NJ, Frenneaux MP, Horowitz JD, Pagano D and Sallustio B (2014) **Relationship between plasma, atrial and ventricular perhexiline concentrations in humans: insights into factors affecting myocardial uptake** (<http://www.ncbi.nlm.nih.gov/pubmed/?term=Relationship+between+plasma%2C+atrial+and+ventricular+perhexiline+concentrations+in+humans%3A+insights+into+factors+affecting+myocardial+uptake>). *Br J Clin Pharmacol* 77(5):789-95

Drury NE, Maniakis-Grivas G, Rogers VJ, Williams LK, Pagano D and Martin-Ucar AE (2012) **The fate of abstracts presented at annual meetings of the Society for Cardiothoracic Surgery in Great Britain and Ireland from 1993 to 2007** (<http://www.ncbi.nlm.nih.gov/pubmed/?term=The+fate+of+abstracts+presented+at+annual+meetings+of+the+Society+for+Cardiothoracic+Surgery+in+Great+Britain+and+Ireland+from+1993+to+2007>). *Eur J Cardiothorac Surg* 42(5): 885-9

Howell NJ, Ashrafian H, Drury NE, Ranasinghe AM, Contractor H, Isackson H, Calvert M, Williams LK, Freemantle N, Quinn DW, Green D, Frenneaux MP, Bonser RS, Mascaro JG, Graham TR, Rooney SJ, Wilson IC and Pagano D (2011) **Glucose-Insulin-Potassium reduces the incidence of low cardiac output episodes after aortic valve replacement for aortic stenosis in patients with left ventricular hypertrophy. Results from the Hypertrophy, Insulin, Glucose and Electrolytes (HINGE) trial** (<http://www.ncbi.nlm.nih.gov/pubmed/21200004>). *Circulation* 123(2):170-7

Nassimzadeh M, Ashrafian H, Drury NE, Howell NJ, Digby J, Pagano D, Frenneaux MP and Born GVR (2010) **Reduced negative surface charge on arterial endothelium explains accelerated atherosclerosis in type 2 diabetic patients** (<http://www.ncbi.nlm.nih.gov/pubmed/?term=Reduced+negative+surface+charge+on+arterial+endothelium+explains+accelerated+atherosclerosis+in+type+2+diabetic+patients>). *Diab Vasc Dis Res* 7(3):213-5

Drury NE, Moro C, Cartwright N, Ali A and Nashef SAM (2010) **A unilateral whiteout: when not to insert a chest drain** (<http://www.ncbi.nlm.nih.gov/pubmed/?term=A+unilateral+whiteout%3A+when+not+to+insert+a+chest+drain>). *J R Soc Med* 103(1):31-3

Drury NE, Kiesewetter C and Veldtman GR (2010) "Right ventricular outflow obstruction in a pregnant woman", In: Gatzoulis MA, Webb GD, Broberg C, Uemura H (eds.), *Cases in Adult Congenital Heart Disease*. Philadelphia: Churchill Livingstone, pp 219-222

Drury NE and Karamanou DM (2009) **Citation of retracted articles: a call for vigilance** (<http://www.ncbi.nlm.nih.gov/pubmed/?term=Citation+of+retracted+articles%3A+a+call+for+vigilance>). *Ann Thorac Surg* 87(2): 670

Drury NE and Nashef SAM (2008) "Routine management after cardiac surgery", In: Klein A, Vuylsteke A, Nashef SAM (eds), *Core Topics in Cardiothoracic Critical Care*. Cambridge: Cambridge University Press, pp 373-4

