



ROYAL COLLEGE OF
PHYSICIANS OF IRELAND

MASTERCLASS

Royal College of Physicians of Ireland
No. 6 Kildare St, Dublin 2

4.00 pm Wednesday, 2 June 2010

RCPI Masterclass Series 2009/2010
***Treating the Acutely Ill
Patient*** – Update and advances
in management of common medical
conditions presenting on call

**Part VII:
Nephrology Session**



Welcome

Dr John Donohoe
President, RCPI

Dr Diarmuid O'Shea
Masterclass Series Convenor, RCPI



Dear Delegates,

In line with its mission to promote excellence in medical education and to support the advancement of the medical profession, we are pleased to welcome you to today's meeting – the Nephrology session of the RCPI Masterclass Series on Treating the Acutely Ill Patient.

The RCPI Masterclass Series – which has run over seven sessions from October 2009 through to June 2010 – is aimed at keeping doctors up to date in evolving medical practice outside their specialty area and to facilitate their continuing medical education.

The objective of the series is to help those who are at the front line of our health service continuously improve their skills base, effectively facilitating excellence in patient care. The series brings together medical experts from a variety of specialties under a central theme, provides a senior forum for peer discussion and has in the past attracted unprecedented numbers for Irish training. The entire series will be webcast live to 26 regional hospitals and will also be available as a recorded webcast via the RCPI's Online Education and Resource Centre.

We would like to thank the chairs of this session, Dr Catherine Wall and Dr Colm Magee, and the speakers for their contribution to the programme and the series.

Each session qualifies for 3 CME credits from RCPI (21 in total for the series).

If you have suggestions for future topics in the series include them on the assessment form in your meeting pack. Alternatively, email your suggestions to us at helenmurray@rcpi.ie.

We hope you enjoy the meeting.

A handwritten signature in black ink, appearing to read 'John Donohoe'.

Dr John Donohoe
President
Royal College of Physicians of Ireland

A handwritten signature in black ink, appearing to read 'Diarmuid O'Shea'.

Dr Diarmuid O'Shea
Vice President for Education and
Professional Development
Royal College of Physicians of Ireland

TIME	TITLE	SPEAKER	CHAIR
15.30 – 16.00	Registration		
16.00 – 16.25	Contrast nephropathy	Dr Donal Reddan, Merlin Park Hospital, Galway	Dr Catherine Wall AMNCH Tallaght, Dublin
16.25 – 16.30	Question and Answer Session		
16.30 – 16.55	Acute kidney injury	Dr Liam Casserly, Limerick Regional Hospital	
16.55 – 17.00	Question and Answer Session		
17.00 – 17.25	Metabolic acidosis	Dr Elizabeth Abernethy, Waterford Regional Hospital	
17.25 – 17.45	Question and Answer Session		
17.45 – 18.00	Refreshments		
18.00 – 18.25	Hypertensive urgencies: clinical pearls	Dr Liam Plant, Cork University Hospital	Dr Colm Magee Beaumont Hospital, Dublin
18.25 – 18.30	Question and Answer Session		
18.30 – 18.55	Drug safety and prescribing in patients with renal failure	Prof Pat Murray, Mater Misericordiae University Hospital, Dublin	
18.55 – 19.00	Question and Answer Session		
19.00 – 19.15	Panel Discussion		

Dr Catherine Wall
AMNCH Tallaght, Dublin



Dr Wall will chair Session 1

Catherine Wall graduated from Trinity College, Dublin in 1993 and undertook postgraduate training in Toronto, Canada and London, England. Dr Wall has been a Consultant Nephrologist in The Adelaide

and Meath Hospital, Dublin since 2006. Dr Wall's interests include vasculitis, glomerular disease, renal disease in pregnancy and medical education.

Dr Colm Magee
Beaumont Hospital, Dublin



Dr Magee will chair Session 2

Colm Magee graduated from the Royal College of Surgeons in Ireland in 1991. He completed General Medicine and Nephrology training in Beaumont Hospital from 1992 to 1996, followed by a Nephrology Fellowship in Brigham and Women's Hospital, Boston, USA. He was Attending Physician and Assistant

Professor of Medicine in Brigham and Women's Hospital, 2000-2007. He has been Consultant Nephrologist in Beaumont Hospital since November 2007.

Dr Magee has clinical and research interests in many areas of nephrology, but especially transplantation.

Session 1

16.00 – 16.25

Contrast nephropathy

Dr Donal Reddan,
Merlin Park Hospital, Galway



Biographical Sketch

Donal Reddan is a Consultant Nephrologist, General Physician and clinical lecturer at University College Galway Hospitals in Ireland.

Dr Reddan earned his medical degree from University College Dublin. After completing general internal medicine training in Dublin at St Vincent's University Hospital, he completed a further residency in internal medicine at Allegheny General Hospital in Pittsburgh, and fellowship in the Division of Nephrology at Duke University Medical Centre Durham, North Carolina. After attaining American board certification in both internal medicine and nephrology, Dr Reddan went on to earn a Masters in Health Sciences from Duke University and joined the faculty at Duke and the Duke Clinical Research Institute. He currently retains an appointment as adjunct assistant professor at Duke University.

Dr Reddan is a Fellow of the Royal College of Physicians of Ireland and is a currently serving Council member of the College. He has published extensively in the area of renal insufficiency and its accompanying cardiovascular risk and on issues relating to contrast nephropathy.

Overview of Presentation

Contrast-induced acute kidney injury (CI-AKI) is a serious but preventable adverse event associated with the use of contrast media (CM).

Our understanding of CI-AKI means it is possible to implement various preventive strategies. Available evidence suggests that adequate pre- and post-procedural hydration, e.g. with sodium bicarbonate, is an effective CI-AKI prevention measure.

Contrast volume and the type of CM used may also influence the development of CI-

AKI. There are many confounding factors/limitations in studies that need to be taken into consideration when comparing and interpreting data, which shall be explored.

This presentation will address the issues and evidence relating to the clinical relevance of CI-AKI, patient identification, preventative strategies and whether these are translated into clinical practice, and the choice of contrast agents used.

16.30 – 16.55

Acute kidney injury

Dr Liam Casserly,
Limerick Regional Hospital



Biographical Sketch

Liam Casserly qualified from National University of Ireland, Galway and interned at University College Hospital Galway. After completing an SHO scheme at the Mater Misericordiae University Hospital he travelled to Boston, Massachusetts where he spent the next ten years at Boston University. After completing residency he was appointed Chief Resident at the Department of Medicine. Subsequently, he completed his fellowship in Nephrology as well as an MSc in Epidemiology at the Boston University School of Public Health.

Research during these years, and as a staff Nephrologist at Boston University, centered on epidemiologic outcomes in renal disease and cardiovascular disease in End-Stage Kidney Disease. He has been working in Limerick as Consultant Nephrologist/General Physician since 2004. Areas of clinical interest include primary amyloidosis, systemic diseases affecting the kidney, End-Stage Kidney Failure and genetics of kidney diseases. He recently chaired the group which developed guidelines for the management of chronic kidney disease in primary care.

Overview of Presentation

Unavailable at time of going to print.

Session 1

17.00 – 17.25

Metabolic acidosis

Dr Elizabeth Abernethy,
Waterford Regional Hospital



Biographical Sketch

Elizabeth Abernethy graduated from University College Cork in 1989. Having pursued her General Professional Training in Ireland, she completed a Residency in Internal Medicine in The Cleveland Clinic Foundation, USA in 1996. She subsequently completed a Nephrology Fellowship in 1999, at Boston University School of Medicine. She joined the Clinical Faculty at Boston University School of Medicine in 1999 until 2010 when she was appointed to Waterford Regional Hospital, as Consultant Nephrologist.

Overview of Presentation

Metabolic acidosis is a common occurrence in critically ill patients. Understanding the pathological mechanisms underlying the generation of protons will enable the

clinician to quickly recognise these disorders and establish an acceptable treatment strategy.

Session 2

18.00 – 18.25

Hypertensive urgencies: clinical pearls

Dr Liam Plant,
Cork University Hospital



Biographical Sketch

Liam Plant is a Consultant Renal Physician and Clinical Senior Lecturer in Nephrology at Cork University Hospital. Dr Plant is a graduate of University College Cork, his Higher Specialist Training in Nephrology occurred in the Royal Infirmary of Edinburgh, where he was subsequently appointed Consultant Renal Physician and Part Time Senior Lecturer in Medicine. After 12 years in Scotland he returned to Cork in 2001.

Dr Plant's interests include the Configuration and Organisation of Renal Services, Acute Kidney Injury, Disorders of Fluid & Electrolyte Balance, Renal Replacement Therapies, Renal Disease in Pregnancy, and the Philosophical and Ethical Contexts of Renal Disease.

Dr Plant is currently the National Clinical Director of the HSE National Renal Office.

Overview of Presentation

The term 'Hypertensive Urgencies' incorporates a number of clinical presentations. For some, it is a term defined by a specific level of measured BP which poses an immediate challenge in terms of patient assessment, characterisation, treatment and follow-up. Amongst this group will be a subset with a true emergency presentation.

This presentation focuses on the importance of initial evaluation of such patients, offering observations on how this group can be easily split into different paradigms of care.

Comment is made on the myriad choices of specific anti-hypertensive agents available and on what evidence can be derived from quality data sources to support or rebut the advocacy of their individual champions.

Hypertensive emergencies afflict about 1% of all hypertensive patients. Contemporary care delivers a 10-year patient survival of about 70%, which contrasts with a 1-year mortality of about 70% in the past. Most patients have a characteristic background history and pattern of presentation. Much could be done to streamline care pathways.

Session 2

18.30 – 18.55

Drug safety and prescribing in patients with renal failure

Prof Pat Murray,
Mater Misericordiae University Hospital, Dublin



Biographical Sketch

Patrick Murray is a Consultant Physician at the Mater Misericordiae University Hospital and University College Dublin. Prof Murray received his medical education at University College Dublin. Following his internship at the Mater Misericordiae University Hospital in Dublin, he completed a residency in internal medicine at Hennepin County Medical Center in Minneapolis, USA. He completed fellowship training programs in nephrology, critical care medicine, and clinical pharmacology at the University of Chicago Hospitals in Chicago, USA.

Prof Murray is board-certified in internal medicine, nephrology, critical care medicine, and clinical pharmacology. He practiced as an intensivist, nephrologist, and clinical pharmacologist at the University of Chicago Hospitals from 1996–2008, serving as the fellowship training program director in nephrology, also directing the Acute Dialysis Service. Since 2008, he has been the Professor of Clinical Pharmacology at University College Dublin, and a Consultant in Nephrology and Clinical Pharmacology at the Mater Misericordiae University Hospital.

He has a long standing interest in research and education to improve the prevention, diagnosis, and therapy of acute kidney injury.

Overview of Presentation

Kidney disease, both acute kidney injury (AKI) and chronic kidney disease (CKD), affects every organ system in the body. The physiological changes associated with kidney disease profoundly alter the pharmacology of many drugs. Caregivers must assess kidney function and consider how decreased kidney function changes the disposition of drugs and their active or toxic metabolites.

The number of patients with AKI and CKD has increased. Advances in the treatment of acute and chronic disease in general have permitted patients to live longer. Many of

them develop decreased kidney function over time.

Novel strategies for treating acute and chronic kidney failure contribute to the need for understanding drug removal during extracorporeal therapies.

There will be four major areas of discussion:

- 1) Effects of impaired kidney function on drug disposition,
- 2) Patient assessment for drug dosing,
- 3) Calculating drug doses in CKD and AKI,
- 4) Drug removal by renal replacement therapy.