Cardiology Preceptorship for GPs

ORGANISED BY THE CARDIAC UNIT OF ALTNAGELVIN HOSPITAL

Western Health and Social Care Trust

Tuesday, 09 December 2008

Welcome to Altnagelvin Cardiac Unit

A new initiative
Dr. Albert McNeill, Clinical Lead in Cardiology, Western HSC Trust, welcomes **Mr. Richard Kelly** from Pfizer UK to the first Cardiology Preceptorship in Altnagelvin Hospital.

Thursday, 4th December 2008 saw the first Cardiology Preceptorship for family doctors held in Altnagelvin Hospital, part of the Western HSC Trust.

A full day programme was organised comprising a morning of lectures in key topics and demonstrations of the latest Cardiological techniques. After lunch, the delegates, visited the unit's catheter lab, echocardiogram labs and treadmill rooms and saw live patient demonstrations.

Six family doctors were able to avail of a kind sponsorship grant from Pfizer UK to leave their practice for the day and attend.

The delegates enjoyed both lectures and practical demonstrations with Chronic Heart Failure, Acute Coronary Syndrome and Atrial Fibrillation lectures provoking a lot of questions related to problems that occur daily in primary care.

Cardiac Faculty

Dr. Albert McNeill

Dr. John Purvis

Dr. Sinead Hughes

Dr. John Riddell

Dr. Stephen Barr

Sr. Shirley McGaffin

Programme

9.30 – 9.45 am	**Welcome & Introduction**
	An Overview of Cardiology Services Within the Trust - Dr A McNeill
9.45 – 10.30 am	**Overview of Non-invasive Cardiac Investigations – Dr S Hughes and Dr J Purvis**
10.30 – 11.00 am	**Management of Acute Coronary Syndromes – Dr A McNeill**
	Coffee Break
11.15 – 11.45 am	**Atrial Fibrillation – Dr J Riddell**
11.45 – 12.15 pm	**Heart Failure – Dr S Barr**
12.15 – 12.45 pm	**Invasive & Interventional Cardiology – Dr J Riddell**
12.45 – 1.15 pm	**Secondary Prevention – Sister S McGaffin**
	Lunch
2.00 pm	**3 Rotating Groups x 3 Workshops (45 mins each):**
	Catheterisation Laboratory **Echo Labs** **Exercise Stress Testing**
4.15 pm	**Summary & Close**

Delegates

Dr. Frank Johnston
Dungiven HC

Dr. John O'Donnell
Park Medical

Dr. Ian McGinley
Waterside HC

Dr. Deirdre Donnelly
Out of Hours Centre

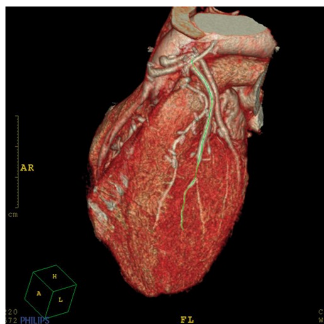
Dr. Brian Quigley
Strabane HC

Dr. Gerry Watson
Strabane HC

Mr. Richard Kelly
Pfizer UK

We Hope to Hold the Preceptorship Course Twice Yearly!

Rapid Access Chest Pain Clinic



Coronary CT Angiogram

The latest generation of CT scanners are capable of examining coronary arteries in close detail. The technique is useful for out-ruling coronary disease and examining coronary artery by-pass grafts as in this case

Dr. John Purvis presented information from the RACPC database. The service has assessed 1147 patients since it was first launched in April 2007. Over 74% of treadmills are negative with patients being reassured that day that all is well.

Some 11% of patients have treadmill tests that are equivocal and for these patients, further tests are required. Altnagelvin has the widest range of intermediate tests in the Province and patients can be referred for Dobutamine Stress Echoes, Myocardial Perfusion Scans or Cardiac CT scans to help clarify results.

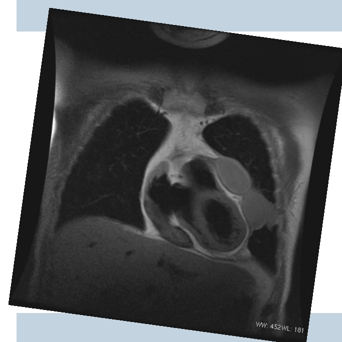
In these equivocal patients, the additional tests show that coronary heart disease is NOT present in 64%

Patients with positive treadmills are referred for cardiac catheterization as soon as possible and a substantial number of these need percutaneous coronary intervention or coronary by-pass graft operations.

Patients who cant do a treadmill are risk assessed using a chest pain and risk factor score and prioritized on that basis.

Altnagelvin is the first hospital in the Province to use this approach for patients unable to treadmill and this is now being adopted throughout NI via the province-wide Cardiac Network

Advanced Cardiac Imaging

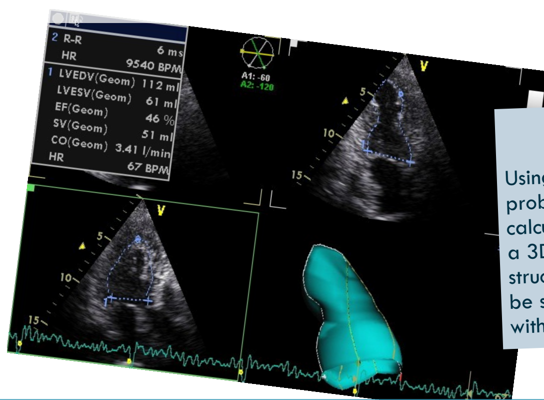


Cardiac MR

High resolution imaging of cardiac anatomy including right heart structure and function is possible with cMR. This technique is particularly useful in cardiomyopathies

Dr Sinead Hughes presented the latest non-invasive cardiac imaging techniques available at Altnagelvin such as Tissue Doppler, 3D echo and Trans Oesophageal Echo as well as discussing tests available at regional level such as cardiac Magnetic Resonance imaging.

Delegates were impressed at the advances in cardiac imaging over the last few years



3D Echo

Using an advanced triplanar echo probe, ventricular volumes can be calculated in multiple planes and a 3D image of the ventricle constructed—here a constriction can be seen in mid LV in this patient with Tako-tsubo syndrome

Acute Coronary Syndromes

Non-STEMI: summary of evidence based therapy

- Aspirin
- Clopidogrel
- LMW heparin
- Anti-ischaemic therapy
- IIb-IIIa inhibitors
- Angio and intervention
- Secondary prevention

ESC guidelines for management of STEMI

- Role of primary angioplasty:
  - Perform in high volume 24/7 centre
  - If pt seen within 2 hrs of symptom onset, FMC to first balloon inflation must be <90 minutes
  - If pt seen after 2 hrs from symptom onset, FMC to first balloon inflation should be <2 hours
  - If PCI not possible within time limits start lysis ASAP
  - When lysis contra-indicated

European Heart Journal December 2008

Dr. Albert McNeill presented management of acute coronary syndromes including the latest guidance from European Cardiac Society on management of ST and non-ST segment myocardial infarction.

Aspirin and Clopidogrel are key agents in prevention of clot formation in the acute coronary syndromes, with the CURE study giving evidence that patients with non ST elevation MI benefit for up to 12 months post event, whilst the CHARISMA study yielded similar data for ST elevation MI with Altnagelvin being a key UK centre for that trial.

Dr. McNeill updated delegates on plans to bring PCI to Altnagelvin in the near future.

The role of primary PCI for acute MI was also discussed in the light of the new ECS guidance.

For the time being the best and most rapid treatment for most patients in our mostly rural area is pre-hospital thrombolysis

The delay times involved for transfer to a primary PCI centre that offers round the clock access remain prohibitive.

Atrial Fibrillation and PCI

Dr. John Riddell presented these two subjects.

Definitions are important when considering how to treat AF:

Paroxysmal AF
Brief duration usually reverts spontaneously

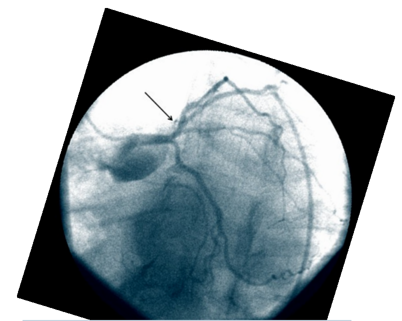
Persistant AF
May last some days, usually needs some form of cardioversion to restore SR.

Permenant AF
Will last indefinitely, might respond to cardioversion, may need rate control.

Warfarin is superior to aspirin as an anticoagulant and is recommended for AF in association with valvular disease as well as those over 75 (high risk of stroke) and those between 65 and 75 who have significant risk factors such as hypertension..

Blood thinning drugs also featured prominently in John's second talk on Percutaneous Coronary Intervention.

Drug Eluting Stents (DES) release agents into the surrounding blood vessel to help prevent coronary artery restenosis. This technique can half the rate of in-stent restenosis from 10% down to 5%., but the lining of the vessel can remain raw and vulnerable to clotting so sometimes the use of aspirin and plavix needs to be extended beyond one year. If in doubt, ask



Vulnerable Plaque

The arrow points to a haemorrhage in a plaque in the proximal Left Anterior Descending coronary artery

Chronic Heart Failure

Dr. Stephen Barr presented, in laconic fashion, a summary of chronic heart failure management with emphasis on drug therapy and practical tips.

BNP
Now available to GPs and an excellent aid to prompt recognition of CHF

Life Saving Drugs:

ACE inhibitors are the cornerstone of CHF management and should be initiated in all cases unless there are significant problems. **Angiotensin Receptor Blockers** are a useful alternative if ACE inhibitors not tolerated.

Beta-blockers are almost as important and need to be considered in all patients. Lipid soluble beta-blockers such as Nebivolol and Bisoprolol have the best trial evidence. Side-effects such as hypotension and exacerbation of asthma/COPD need to be watched carefully and therapy should not be initiated in the acute, wet, patient. Start low and go slow is the best up-titration advice.

Aldosterone antagonists such as Spironolactone are life-saving in the more severe cases but care must be taken in the elderly and those with poor renal function.

ALMOST 700 CARDIAC CATHETER PROCEDURES ARE PERFORMED IN ALTNAGELVIN EACH YEAR

Secondary Prevention

Sr. Shirley McGaffin presented guidelines on secondary prevention. Patients admitted to the cardiology unit with a diagnosis of acute coronary syndrome are now followed up by the secondary prevention and rehabilitation team.

Priorities include ensuring patients are on:

- **Aspirin**
- **Beta-blockers**
- **ACE Inhibitors**
- **Statin therapy**
- **Omacor as per NICE**
- **Plavix as per ACS guidelines**

To get full benefit from secondary prevention drugs, all efforts should be made to up-titrate towards top doses.

Overall patients enjoy the secondary prevention experience and the opportunity to talk to clinical psychology, dietitians, pharmacists as well as doctors and nurses about their condition.

Lipid targets for secondary prevention are 4mmol/l for total cholesterol and 2mmol/l for LDL

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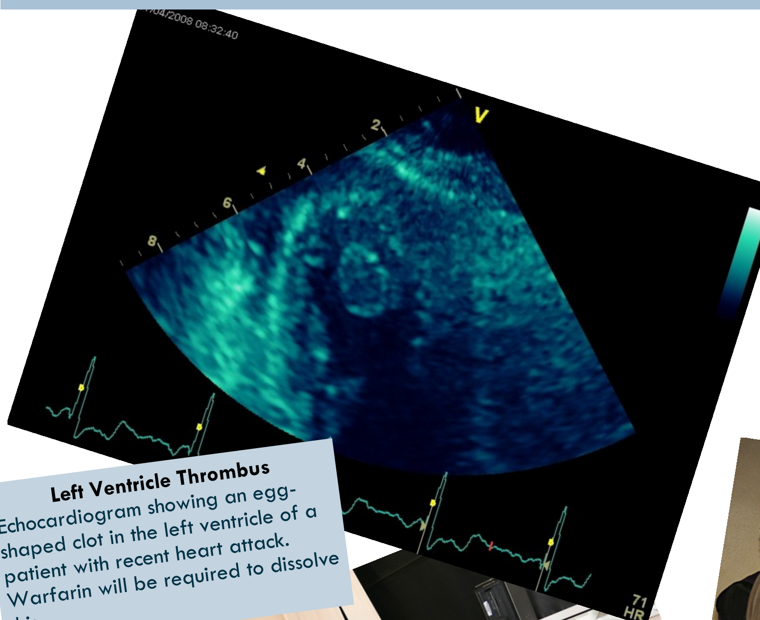
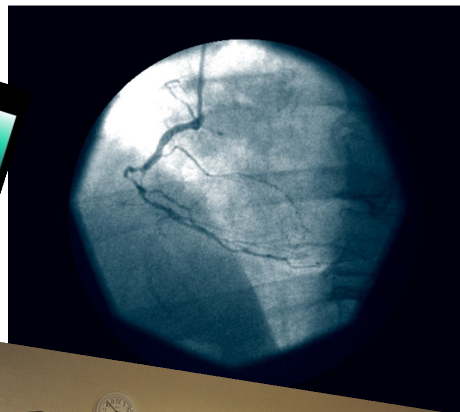
THURSDAY 4TH DECEMBER 2008



Left Ventricle Thrombus
Echocardiogram showing an egg-shaped clot in the left ventricle of a patient with recent heart attack. Warfarin will be required to dissolve this.



Echo Lab Visit
Clinical Physiologist Pauline McKenna shows Mr. Richard Kelly how to perform offline analysis of echocardiogram images on a workstation, this allows detailed analysis to occur after the patient has left and speeds up patient throughput.

Cath Lab Visit

ABOVE
A severe stenosis of the right coronary artery suitable for a stent procedure.

BELOW
Dr. John Riddell demonstrates a radial artery sheath used to cannulate the wrist artery for cardiac catheterisation.

And Finally…

The consultant staff of Altnagelvin Cardiac Unit wish to thank all those who made the Preceptorship a success. We are sorry that Dr. Paul McGlinchey was unable to join us on this occasion due to PCI commitments in Belfast City Hospital but we hope to have the benefit of Paul's experience in the future.

We are especially grateful to the staff of the Treadmill, Echo and Cath Labs who welcomed our guests for the day and went out of their way to explain and demonstrate the technology involved.

We are grateful to hospital site management for use of the old Boardroom which made an ideal lecture theatre for the day.

We hope that the delegates enjoyed the series of lectures and practical demonstrations and can take the experience forward into daily life in practice.

We wish to thank Pfizer UK for making the day possible and supporting the delegates' attendance.

We hope to hold further courses in the future—if you would like to attend please contact the editor, Dr John Purvis:

john.purvis@westerntrust.hscni.net

*Our Thanks to **Pfizer UK** for sponsoring the event*