

# Abstracts: 45th St Andrew's Day Festival Symposium: Updates on Acute and Internal Medicine

**ABBREVIATIONS** Chronic obstructive pulmonary disease (COPD), Community acquired pneumonia (CAP), continuous positive airway pressure (CPAP), Crohn's disease (CD), Inflammatory bowel disease (IBD), Non Alcoholic Fatty Liver Disease (NAFLD), obstructive sleep apnoea hypopnoea syndrome (OSAHS), spontaneous bacterial peritonitis (SBP), Ulcerative colitis (UC)

## DAY I

### SESSION I

Chairman: Dr A Jones, Consultant Physician and Director, Medical Toxicology Unit and National Poisons Information Service, Guy's and St Thomas Hospital Trust, London, England

#### What's new in COPD?

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#### Abstract

**Background** Chronic obstructive pulmonary disease remains a major cause of mortality and morbidity internationally and this is now recognised with large carefully conducted epidemiological studies establishing, a prevalence in adults of 6%–10%. International guidelines now emphasise the preventable and treatable nature of COPD and recent data support this view.

**Methods or Theme** COPD can be recognised by a combination of symptoms and spirometry and simple questionnaires have proved cost-effective in identifying patients for diagnosis. The inflammatory nature of the disorder and particularly the role of oxidative stress is increasingly studied while physiological measurements emphasise the importance of changes in lung volume during exercise and also in the recovery from exacerbations of COPD. These relate to the severity of breathlessness and improve with treatment.

Long-acting inhaled bronchodilators are now standard therapy in COPD reducing exacerbation numbers and improving health status. Inhaled corticosteroids are less effective but may reduce COPD mortality, a concept now being tested in a large multi-national three year trial which reports in 2006. There is better evidence for ambulatory oxygen therapy, an increasing interest in using Heliox to increase exercise performance and reduce breathlessness. Treatment of exacerbations is more

rational and the use of intravenous aminophylline in most cases has now been discredited. Non-invasive ventilation is now standard management for respiratory failure while assisted discharge schemes have been widely adopted.

**Conclusions** Much progress has been made in all areas of COPD care but the most important may be the recent political recognition of the importance of this condition.

#### References

- 1 Celli BR, McNee W. Standards for the diagnosis and treatment of patients with COPD: a summary of the ATS/ERS position paper. *Eur Respir J* 2004; 23:932-46.
- 2 Stevenson NJ, Walker PP, Costello WR, Calverley PMA. Lung mechanics and dyspnea during exacerbations of chronic obstructive pulmonary disease. *Am J Respir Crit Care Med* 2005; (Epub. Sept. 15).
- 3 Sin DD, Wu L, Anderson JA et al. Inhaled corticosteroids and mortality in chronic obstructive pulmonary disease. *Thorax* 2005; 60:992-97.
- 4 Duffy N, Walker P, Diamantea F, Calverley PMA, Davies L. Intravenous aminophylline in patients admitted to hospital with non-acidotic exacerbations of COPD. *Thorax* 2005; 60:713-7.

**Key words** Chronic obstructive, exacerbation, hyperinflation, inflammation, pulmonary disease.

**Sponsors** None.

**Declaration** I have received honoraria and research funding from several pharmaceutical companies including GSK, Astra Zeneca and Boehringer-Pfizer together with research funding from BOC.

#### Sleep apnoea – a major problem across medicine

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**Abstract** The obstructive sleep apnoea hypopnoea syndrome occurs in around 2% of the population and results from recurrent occlusion of the throat during sleep, causing marked daytime sleepiness and road accidents.<sup>1</sup> OSAHS results in systemic hypertension,

treatment with CPAP therapy producing significant falls in blood pressure<sup>2</sup> which may reduce cardiovascular risk by 20–30%. Up to 30% of patients in hypertension clinics may have unrecognised OSAHS.<sup>3</sup> Sudden nocturnal death is increased in sleep apnoea.<sup>4</sup> There is recent evidence that OSAHS increases the risk of both myocardial infarction and stroke.<sup>5</sup> SAHS is common after stroke but there are divergent studies about whether treatment with CPAP is helpful.

Irregular breathing during sleep is associated with impaired glucose tolerance independent of other risk factors.<sup>6</sup> Recent data indicates that CPAP improves diabetic control in diabetics with OSAHS.<sup>7</sup> Other studies have shown an association between abnormal breathing during sleep and renal failure and also that liver injury is occurs in OSAHS.<sup>8</sup>

Obstructive sleep apnoea hypopnoea syndrome is a common condition with diverse manifestations.

#### References

- 1 Douglas NJ. *Clinicians' Guide to Sleep Medicine*. London: Arnold; 2002.
- 2 Faccenda JF, Mackay TW, Boon NA, Douglas NJ. Randomized Placebo-controlled Trial of Continuous Positive Airway Pressure on Blood Pressure in the Sleep Apnea-Hypopnea Syndrome. *Am J Respir Crit Care Med* 2001; **163**:344–8.
- 3 Worsnop CJ, Naughton MT, Barter CE, Morgan TO, Anderson AI, Pierce RJ. The prevalence of obstructive sleep apnea in hypertensives. *Am J Respir Crit Care Med* 1998; **157**:1111–5.
- 4 Gami AS, Howard DE, Olson EJ, Somers VK. Day-night pattern of sudden death in obstructive sleep apnea. *N Engl J Med* 2005; **352**:1206–14.
- 5 Yaggi HK, Concato J, Kernan WN, Lichtman JH, Brass LM, Mohsenin V. Obstructive Sleep Apnea as a Risk Factor for Stroke and Death. *N Engl J Med* 2005; **353**:2034–41.
- 6 Punjabi NM, Shahar E, Redline S, Gottlieb DJ, Givelber R, Resnick HE. Sleep-disordered breathing, glucose intolerance, and insulin resistance: the Sleep Heart Health Study. *Am J Epidemiol* 2004; **160**:521–30.
- 7 Babu AR, Herdegen J, Fogelfeld L, Shott S, Mazzone T. Type 2 diabetes, glycemic control, and continuous positive airway pressure in obstructive sleep apnea. *Arch Intern Med* 2005; **165**:447–52.
- 8 Tanne F, Gagnadoux F, Chazouilleres O et al. Chronic liver injury during obstructive sleep apnea. *Hepatology* 2005; **41**:1290–6.

**Key words** CPAP therapy, daytime sleepiness, OSAHS, road accidents.

**Sponsors** None.

**Declaration** No conflict of interest declared.

#### New drugs: how do we decide when they are effective and safe?

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**Abstract** In order to be granted a marketing authorisation, new drugs need to have data that demonstrate that they are efficacious and safe in the intended indication(s) and that they have acceptable pharmaceutical quality. At the time of licensing only several thousand subjects will have taken a novel treatment. Whilst this number has been increasing in recent years, such small numbers are insufficient to detect serious adverse reactions that are less common than one in a few thousand. Thus safety of medicines has traditionally been assessed after a marketing authorisation has been granted and it is usually some time before the full safety profile can be assessed.

Clinical trials determine the efficacy of therapy. These trials control for doctor, patient and 'system' behaviour in order to dissect out drug effects. In a healthcare setting drugs are often prescribed to subjects who were not well represented in trials and doctor, patient and 'system' behaviour all affect the way that they are used. Studies that determine whether a novel therapy is 'effective' in a health care setting are thus important in making a judgement as to whether or not they should be used more widely. Such effectiveness studies are also needed to provide data for pharmaco-economic studies.

Effectiveness studies can be done using observational data however there are some limitations with this approach. Effectiveness and safety in the health care setting can better be established by doing simplified randomised studies in clinical practice. Such studies have much to commend them and their execution should become part of new drug evaluation within the NHS.

**Key words** Adverse reactions, efficacious, marketing authorisation, pharmaco-economic studies, randomised studies, safe.

**Sponsors** None.

**Declaration** No conflict of interest declared.

## SESSION 2

Chairman: Dr J Collins, Consultant Gastroenterologist, Royal Victoria Hospital, Belfast, Northern Ireland

### Alcohol and the liver in acute medicine

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#### Abstract

**Background** Over the past ten years there has been a dramatic rise in alcohol consumption in the UK with a corresponding rise in alcohol related deaths. There has also been a 13% rise in alcohol related Hospital admissions and 41% rise in ALD in Scotland from 1997–2004, particularly amongst males from deprived areas. Patients with alcohol related problems now constitute a significant proportion of the acute medical 'take'. Such patients provide many challenges, including management of alcohol withdrawal, seizures, the complications of decompensated liver disease and alcoholic hepatitis.

**Methods or Theme** I will discuss the evidence for, and outline management strategies for alcohol withdrawal, the complications of decompensated liver disease and alcoholic hepatitis.

Withdrawal symptoms peak at 24–36 hours and last up to five days. Delirium tremens develop in 5% of those withdrawing and has a 2–10% mortality. Treatment should consist of IV pabrinex and symptom triggered benzodiazepines using scales such as CIWA to identify those at risk. Other drugs have not been shown to be superior to benzodiazepines in this situation. There is no role for prophylactic phenytoin for seizures. However patients with decompensated liver disease and encephalopathy should not be sedated, but a search made for an underlying precipitant of the encephalopathy.

All patients with cirrhotic ascites should have a diagnostic ascitic tap undertaken on admission to exclude SBP which occurs in 10–30% such patients. If found, this should be treated with IV antibiotics and albumin. Hepatorenal syndrome is a functional renal failure secondary to decompensated liver disease in the absence of other causes of renal impairment. Mean survival is two weeks although intravenous vasopressors and albumin may be of benefit.

Alcoholic hepatitis is a particularly florid liver injury with high mortality. Patients can be assessed using Maddreys discriminant function or the Glasgow alcoholic Hepatitis score, which can identify patients likely to benefit from steroid therapy. Nutritional support/therapy is also very important in such patients.

**Conclusions** We should identify and treat those at risk from alcohol withdrawal and also appropriately manage patients with features of decompensated ALD including SBP and renal dysfunction. Patients with severe alcoholic hepatitis should be considered for steroid therapy.

#### References

- 1 Butler et al. *Scot Med J* 2001; **46**:104–5.
- 2 Foy et al. *Q J Med* 1997; **90**:253–61.
- 3 Holbrook et al. *CMAJ* 1999; **160**:649–55.
- 4 Mayo-Smith et al. *JAMA* 1997; **277**:144–51.
- 5 Daeppen et al. *Arch Intern Med* 2002; **162**:1093–4.
- 6 Mayo-Smith et al. *Arch Intern Med* 2004; **164**:1405–12.
- 7 Sort et al. *N Engl J Med* 1999; **341**:443–4.
- 8 Mowat C & Stanley AJ. *APT* 2001; **15**:1851–9.
- 9 Forrest EH et al. *Gut* 2005; **54**:1174–79.
- 10 Mathurin et al. *J Hepatol* 2002; **36**:480–7.

**Key words** Alcohol, alcoholic hepatitis, withdrawal.

**Sponsors** None.

**Declaration** Member of advisory board for Terlipressin and accepted hospitality from Roche, Schering-Plough and Ferring Pharmaceuticals.

#### Non-alcoholic fatty liver disease

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**Abstract** Non Alcoholic Fatty Liver Disease is the commonest liver disease in the developed world affecting up to a third of the population. Non Alcoholic Fatty Liver Disease is considered to be the liver manifestation of the metabolic syndrome. It can progress from simple fatty liver through inflammation and fibrosis to advanced cirrhosis and liver cell cancer. Non Alcoholic Fatty Liver Disease probably accounts for the majority of cases of cryptogenic cirrhosis. The diagnosis of NAFLD is usually one of exclusion along with a compatible abdominal ultrasound. Older patients with Type 2 Diabetes and with an AST/ALT ratio >1 are more likely to have advanced disease and require liver biopsy. Management of NAFLD consist of treating individual components of the metabolic syndrome which almost certainly improves the liver disease. There is some evidences that insulin sensitisers such as metformin and gliatzones should be used even in non diabetic patients. Patients with advanced disease should be screened aggressively for the development of liver cell cancer.

#### References

- 1 Day CP. Natural history of NAFLD; remarkably benign in the absence of cirrhosis. *Gastroenterology* 2005; **129**:375–8.
- 2 Day CP. From fat to inflammation. *Gastroenterology*. In Press.
- 3 Skelly MM et al. Findings on liver biopsy to investigate abnormal liver function tests in the absence of diagnostic serology. *J Hepatol* 2001; **35**:195–199.
- 4 Bugianesi E et al. Insulin resistance: A metabolic pathway to chronic liver disease. *Hepatology* 2005; **42**:987–1000.

**Key words** Hepatic steatosis, insulin resistance, steatohepatitis.

**Sponsors** None.

**Declaration** Professor Day has received grant support from Roche UK.

### **Life in the Iron Age – the natural history of falls and their extinction**

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**Abstract** There is no homogeneous biomass called the elderly and ageing is characterised by increasing diversity. Those tanned, superannuated, fit new pensioners in the bronze age can slip down that slope to acquire the dynamic hip screw and zimmer frame so characteristic of the iron age. By the time the stone age arrives the condition may be fixed. Falls prevention is about targeting those in the bronze and early iron ages and preventing further decline.

There have been four distinct phases of falls research in older people. The initial descriptive studies of Joseph Sheldon led to an epidemiological stage with the identification of risk factors like muscle weakness, sedative medication use and poor vision. Thereafter interventions based on these risk factors have been shown to reduce falls in studies from three continents but the diverse nature of these fixes means such programmes are hard to coordinate. More recently concentration has been on which single intervention is most useful for which target group.

So far we have RCT evidence for:

- a) Risk factor modification;
- b) Balance training and resistive exercise;
- c) Psychotropic medication withdrawal;
- d) Cataract surgery;
- e) Environmental hazard withdrawal in the severely visually impaired.

In institutions a systems approach 'owned' by the facility has proved effective in residential homes and hospital geriatric units. Vitamin D appears to reduce falls in the frailest institutionalized older people. Some evidence suggests that falls prevention programmes increase confidence and activity.

There is also a growing canon of negative trials. Things which haven't been shown to be effective so far include:

- 1) Falls clinics;
- 2) Interventions in those with dementia without an

involved carer;

- 3) Outreach falls prevention teams.

As fractures only complicate about 6% of falls none of the trials of falls prevention have demonstrated fracture reduction – probably a reflection of their statistical power rather than lack of effect.

**Key words** Falls prevention, fracture reduction, geriatric units, residential homes.

**Sponsors** None.

**Declaration** No conflict of interest declared.

### **SESSION 3**

Chairman: Dr K Jennings, Consultant Cardiologist, Aberdeen Royal Infirmary, Aberdeen, Scotland

#### **When to call a renal physician and what to do before you do**

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**Abstract**

**Background** We will cover 4 broad areas:

- 1) A pragmatic approach to the identification and management of acute renal failure from a general physician's perspective. What is common and therefore likely in hospital practice. Common pitfalls and a collection of tricks.
- 2) Managing dialysis dependant patients in A&E. Common things are pulmonary oedema, hyperkalaemia and septic or bleeding access
- 3) The explosion of chronic kidney disease. Five per cent of most 1st world populations have chronic kidney disease. For a nephrologist in the UK to see this group would require 148 patient consults per day. We will review the definitions of the five stages of chronic kidney disease and the inadequacy of creatinine as a measure to direct management and a possible alternative. I will discuss the joint specialist committee guidelines for referral to secondary care which reflect the NICE guidelines but are a little more practical and possible applicable in everyday primary care and general hospital practice.
- 4) Diabetic renal disease deserves special mention. It is common and accounts for 30% of the UK dialysis programme. Strategies to control BP, reduction in hyperfiltration using ACE I first line and possibly adding in Angiotensin receptor blockers, tight

glycaemic control and attention to cardiovascular risk factors retards progression and probably reduces mortality.

**Conclusions** Acute renal failure is related to a reduced effective circulating volume in 80% of cases and this should be the first part of an assessment of any patient.

CKD is present in between 5–11% of the general population. Our challenge is to remove patients with stable stage 1, 2 and 3 CKD from our specialist clinics to primary care and screen the general population at risk with hypertension, diabetes, and macrovascular disease using e GFR based on 4 variable MDRD calculation which should become standard in our biochemistry laboratories.

Diabetes is a major source of CKD ACE I and ARB possibly in combination and tight diabetic control are the mainstays of retarding progression.

#### References

- 1 Lieberthal W. Treatment of acute tubular necrosis. *Semin Nephrol* 1990;**10**(6):571–83.
- 2 Bellomo R. (ANZICS) *Lancet* 2000; **356**:2139–43.
- 3 JSC. Guidelines for CKD management [www.renal.org/CKDguide/full/Conciseguid270905.pdf](http://www.renal.org/CKDguide/full/Conciseguid270905.pdf)

**Key words** Acute renal failure, chronic kidney disease.

**Sponsors** None.

**Declaration** No conflict of interest declared.

#### The acute coronary syndromes

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**Abstract** The acute coronary syndromes are grouped together because they share a common pathology (plaque erosion or rupture and coronary thrombosis). They comprise a wide spectrum of disorders which are defined by the clinical features, biochemical and ECG changes. Initial management is based on the appearance of the ECG.

Several trials have demonstrated that early intervention improves the outcome in patients with acute coronary syndromes without persistent ST segment elevation. The five year outcome data of the RITA 3 trial were published last month and, like some of the other trials, suggest that this benefit is confined to patients at high risk. Identifying which patients are at high risk is difficult and controversial. This will be illustrated by a brief interactive case presentation.

The recently published CLARITY and COMMIT trials have demonstrated that the early use of Clopidogrel (in

addition to Aspirin) improves the outcome in patients who present with persistent ST segment elevation myocardial infarction. Prompt reperfusion is the main objective in the management of these patients. Choosing the optimum method of reperfusion remains controversial. Local infrastructure, the risk of bleeding and the time from onset of symptoms all influence the reperfusion therapy. This will be illustrated by a brief interactive case presentation.

**Key words** acute coronary syndromes, aspirin, CLARITY trial, clopidogrel, COMMIT trial, ECG changes, RITA 3 trial.

**Sponsors** None.

**Declaration** No conflict of interest declared.

#### Current management of atrial fibrillation

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**Abstract** The principal objectives in the management of atrial fibrillation are prophylaxis against thrombo-embolism, control of ventricular rate, and (if possible) restoration of sinus rhythm. Abundant evidence exists that warfarin anti-coagulation is the most effective means of reducing the risk of thrombo-embolism in atrial fibrillation, reducing the risk by 20–30 strokes per 1,000 patient years of therapy in primary prevention and approximately 80 per 1,000 patient years in those with previous CVA/TIA.

Ventricular rate control is essential to minimise the haemodynamic consequences of atrial fibrillation. Current evidence indicates that the drugs of first choice are either beta blockers or rate limiting calcium channel blockers, while digoxin may be added as a second line drug if the target rate is not achieved. In patients whose heart rate is uncontrolled by medical therapy, radiofrequency ablation of the atrioventricular node and permanent pacemaker implantation can be considered.

Attempts to restore and maintain sinus rhythm are hampered by poor long-term efficacy and by toxicity of currently available anti-arrhythmic drugs. As a result, recent clinical trials have shown no evidence of benefit in terms of survival, hospitalisation or quality of life associated with strategies of rhythm control as opposed to adequate rate control. Thus if patients are not severely symptomatic, and there has been no acute precipitating cause, it is acceptable to control heart rate, anticoagulate the patient and not attempt restoration of sinus rhythm.

However, a small proportion of patients are highly symptomatic either from paroxysmal or persistent atrial fibrillation. Recent recognition that atrial fibrillation may

originate from rapidly discharging foci in the pulmonary veins has led to the development of techniques of electrical isolation of the pulmonary veins by radio-frequency ablation, associated in some instances with linear lesions in the left atrium. These techniques are rapidly evolving, and offer the prospect in future of curative treatment for atrial fibrillation in an increasing proportion of patients.

### References

- 1 Roy D, Talajic M, Dorian P *et al.* Amiodarone to prevent recurrence of atrial fibrillation. Canadian Trial of Atrial Fibrillation Investigators. *N Engl J Med* 2000; **342**:913–20.
- 2 Wyse DG, Waldo AL, DiMarco JP *et al.* Atrial Fibrillation Follow-up Investigation of Rhythm Management (AFFIRM) Investigators. A comparison of rate control and rhythm control in patients with atrial fibrillation. *N Engl J Med* 2002; **347**:1825–33.
- 3 Haissaguerre M, Jais P, Shah DC *et al.* Spontaneous initiation of atrial fibrillation by ectopic beats originating in the pulmonary veins. *N Engl J Med* 1998; **339**:659–66.

**Key words** Anticoagulation, atrial fibrillation, radiofrequency ablation

**Sponsors** British Heart Foundation.

**Declaration** No conflict of interest declared.

## DAY 2

### SESSION 1

Chairman: Dr P Zentler-Munro, Consultant Physician and Gastroenterologist, Raigmore Hospital, Inverness, Scotland

#### How I manage acute GI bleeding

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**Abstract** Acute upper gastrointestinal haemorrhage is responsible for about 25,000 admissions each year to hospitals in the UK. The incidence varies from approximately 50–150 cases per 10,000 per year and is highest in areas of social deprivation.

The mortality of patients admitted to hospital because of acute gastrointestinal bleeding is approximately 10% and has not changed over half a century. In mitigation, case mix has changed greatly over this time and patients are now older and have greater medical disability than was the case 50 years ago.

**Causes** These are listed in Table 2. The most important cause of major life threatening acute gastrointestinal bleeding is peptic ulcer. Significant haemorrhage is due to

erosion of an underlying artery and the magnitude of bleeding is related to the size of the arterial defect and the diameter of the artery; consequently bleeding from a large posterior duodenal ulcer which may erode the gastroduodenal artery and high, lesser curve gastric ulcers involving branches of the left gastric artery can be particularly severe. The majority of cases present with little or no history of dyspepsia whilst a history of Aspirin or NSAID consumption is common.

Oesophago-gastric varices are a less common cause but because the patient often has other features of decompensated cirrhosis and because bleeding is often high volume the impact on hospital resources is high. Prognosis is related to the severity of liver disease rather than to the magnitude of bleeding.

Oesophagitis is a common finding in elderly patients who present with 'coffee ground' haematemesis. Bleeding is never life threatening and conservative supportive therapy combined with the use of proton pump acid inhibitor drugs is all that is necessary.

Gastritis, duodenitis and gastroduodenal erosions are often linked to NSAID use and to *H.Pylori* infection. Circulatory support, stopping NSAIDs and *H.Pylori* eradication are required.

**Risk assessment** is based on both the severity of haemorrhage and the general health of the patient.

The best risk assessment tool is the Rockall score I, developed from a large prospective audit of patients who were managed for acute upper gastrointestinal bleeding in England. Multi-variant analysis identified age, shock, medical co-morbidity and specific endoscopic findings as independent variables which predicted re-bleeding and death.

**Management: Resuscitation.** The principles of 'airway, breathing and circulation' apply. Patients who present with major bleeding are frequently elderly and have significant cardio-respiratory, renal and cerebrovascular co-morbidity. It is crucial that this is recognised and supported since most deaths are due to decompensation of general medical diseases precipitated either by the bleed itself or by post-operative complications which are much more likely when medical co-morbidity is present. Central venous pressure monitoring is useful in the elderly and in patients with cardiac disease to optimize decisions concerning fluid replacement. Intravenous fluids should be given through a large cannula inserted in an anti-cubital vein. Crystalloids (principally normal saline) are used to normalize blood pressure and urine output; colloids (such as geleafusin) are often employed in the presence of major hypotension. Saline should be used with care in patients with liver disease.

**TABLE 1** Biological therapies in IBD. Terminology of monoclonal antibody: chimeric: ending with **ximab**; humanised: ending with **zumab**; fully human: ending with **mumab**.

Pharmaceutical preparation	Indication	Status
<b>Anti-TNF antibodies</b>		
Infliximab (Chimeric IgG1)	CD UC	Licensed Phase III (successful)
CDP571 (Humanised IgG4)	CD/UC	Withdrawn from development
CDP870 (Humanised Pegylated Fab)	CD	Phase III (successful)
Adalimumab (Human IgG1)	CD	Phase III (successful)
<b>p75 and p55 TNF receptors</b>		
Etanercept (p75 fusion protein)	CD	Failed
Onercept (Human p55 soluble receptor)	CD	Failed
<b>Other anti-TNF strategies</b>		
RDP58 (Peptide consisting of d-amino acids and glycine)	CD UC	Phase II Phase II
<b>Anti-leukocyte trafficking</b>		
Natalizumab (Humanised IgG4 to $\alpha 4$ -integrin)	CD UC	Phase III (successful) Phase II
LDP-02 or MLN-02 (Humanised IgG1 to $\alpha 4\beta 7$ Integrin)	CD UC	Phase II Phase II
Alicaforsen, ISIS 2302 (antisense Nucleic acid against ICAM)	CD	Failed
<b>Anti-IL2 receptor antibody</b>		
Basiliximab (chimeric)	UC	Phase II
Daclizumab (humanised)	UC	Phase II
<b>Anti-IL12p40</b>		
J695, ABT-874 (Human IgG1)	CD	Phase II
<b>Anti-interferon <math>\gamma</math></b>		
Fontolizumab (Humanised)	CD	Phase II
<b>Anti-IL6 receptor antibody</b>		
Tocilizumab	CD	Phase II
<b>GM-CSF</b>		
Sargramostim (recombinant human)	CD	Phase III
<b>Epidermal growth factor</b>		
	UC	Phase II
<b>Anti CD3 antibody</b>		
Visilizumab	UC	Phase III

Blood transfusion is administered to patients who are shocked and are actively bleeding. Blood is also transfused when the haemoglobin concentration is less than 10 g/dl. The evidence base for this transfusion threshold is rather poor, but it is known in the Intensive Care setting that a haemoglobin concentration of less than 7 g/dl has significant adverse cardiac effects and it is reasonable to pre-empt this by employing a value of 10 g/dl in bleeding patients.

Appropriate monitoring includes measurement of pulse, blood pressure, urine output (through an indwelling catheter) and central venous pressure. Actively bleeding, shocked patients are managed in a high dependency environment.

#### References

- 1 Rockall TA, Logan RFA, Devlin HB *et al*. Risk assessment after acute upper gastrointestinal haemorrhage. *Gut* 1996; **38**:316–21.
- 2 Cook DJ, Gayatt GH, Salena BJ *et al*. Endoscopic therapy for acute non-variceal hemorrhage; a meta-analysis. *Gastroenterology* 1992; **102**:39–148.
- 3 Chung SCS, Leung JWC, Steele RJC. Endoscopic injection of adrenaline for actively bleeding ulcers; a randomised trial. *Brit Med J* 1988; **296**:1631–3.
- 4 Choudari CP, Palmer KR. Endoscopic injection therapy for bleeding peptic ulcer: a comparison of adrenaline alone with adrenaline plus ethanolamine oleate. *Gut* 1994; **35**:608–10.
- 5 Rutgers P, Rauws E, Wara P *et al*. Randomized trial of single and repeated fibrin glue compared with injection of polidocanol in treatment of bleeding peptic ulcer. *Lancet* 1997; **350**:692–6.
- 6 Kubba AK, Murphy W, Palmer KR. Endoscopic injection for bleeding peptic ulcer: a comparison of adrenaline with adrenaline plus human thrombin. *Gastroenterology* 1996; **111**:623–8.

- 7 Fullarton GM, Birnie GG, MacDonald A *et al.* Controlled trial of heater probe in bleeding peptic ulcers. *Brit J Surg* 1989; **76**:541–4.
- 8 Chung SCS, Lau JY, Sung JJ. Randomized comparison between adrenaline injection alone and adrenaline injection plus heat probe treatment for actively bleeding peptic ulcers. *Brit Med J* 1997; **314**:1307–11.
- 9 Church NI, Dallal HJ, Masson J *et al.* A randomized trial comparing heater probe plus thrombin with heater probe plus placebo for bleeding peptic ulcer. *Gastroenterology* 2003; **125**:396–404.
- 10 Lau JYW, Sung JY, Kim HS *et al.* Endoscopic retreatment compared with surgery in patients with recurrent bleeding after initial endoscopic control of bleeding ulcers. *N Eng J Med* 1999; **340**:751–6.
- 11 Lau JYW, Sung JY, Lee KK *et al.* Effect of intravenous omeprazole on recurrent bleeding after endoscopic treatment of bleeding peptic ulcers. *N Eng J Med* 2000; **343**:310–6.
- 12 Jenkins SA, Poulianos G, Corragio F *et al.* Somatostatin in the treatment of non-variceal upper gastrointestinal bleeding. *Dis Dig Sci* 1998; **16**:214–24.

**Key words** Aspirin, duodenitis and gastroduodenal erosions, dyspepsia, gastritis, gastrointestinal haemorrhage, *H.Pylori* infection, NSAID, oesophagitis, oesophago-gastric varices, peptic ulcer, risk assessment, Rockall score.

**Sponsors** None.

**Declaration** No conflict of interest declared.

### Inflammatory Bowel Disease

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**Abstract** Inflammatory bowel disease consists of ulcerative colitis and Crohn's disease. Ulcerative colitis is characterised by continuous diffuse mucosal inflammation of the colon. Crohn's disease in contrast is characterised by patchy transmural inflammation of any part of the gastrointestinal tract. In 5% of patients the disease is designated indeterminate colitis as some features of both ulcerative and Crohn's colitis are present. The incidence of UC stable at approximately 10–20 per 100,000 per year with a prevalence of 100–200 per 100,000. The incidence of CD is around 5–10 per 100,000 per year with a prevalence of 50–100 per 100,000. The epidemiological trends are variable for CD even in the West. Geographical prevalence of IBD has a north-south as well as east-west gradient, though the incidence of the disease appears to be increasing in the Far East and South Asia. Increasing emergence and recognition of the disease in countries where the prevalence was previously low, such as Eastern Europe, South Asia and Far East would suggest that environmental factors associated with Westernisation are important. Recognition of the disease is therefore important worldwide and this review addresses diagnosis and assessment of severity. The disease occurs mostly

**TABLE 2** Causes of acute upper gastrointestinal bleeding.

CAUSE	FREQUENCY (%)
Peptic Ulcer	35–50
Varices	5–12
Mallory-Weiss tear	2–5
Oesophagitis	20–30
Duodenitis/ Gastritis/ erosions	10–20
Vascular	2–3
Tumours	2–5
Aorto-duodenal fistula	<1

commonly in 20–40 year age group. Risk of dysplasia and cancer is related to duration and extent of chronic inflammation.

Inflammatory bowel disease occurs in genetically susceptible individuals as a response to unknown environmental triggers. Gut bacterial flora interacts with innate and the adaptive immune system of the intestine to perpetuate the inflammation. Significant advances in genetics have led to identification of CARD15/NOD2 mutations located on chromosome 16 associated with small intestinal CD in Caucasian but not oriental populations. This would suggest that the genetic predispositions in the West are different from those in the East. Two further gene mutations, OCTN1 and 2 on chromosome 5 and DLG5 on chromosome 10 have been recently associated with CD. The former is better replicated. Involvement of other genes are strongly suggested by replicated linkage to a number of chromosomes. The key molecules and cells involved in the chronic inflammatory process in IBD serve as targets for development of specific novel therapy. Currently immunomodulator drugs such as azathioprine and methotrexate are the mainstays of disease modifying therapy. The next decade is likely to be dominated by the development of biological therapies and the place of such novel therapies as well as conventional therapies will be debated. Well recognised environmental influences include smoking which decreases the risk of UC but increases the risk and worsens the clinical course of CD. Appendicectomy for an inflamed appendix is also protective against the development of UC. See Table 1.

### References

- 1 Egan LJ, Sandborn WJ. Advances in the treatment of Crohn's disease. *Gastroenterology* 2004; **126**:1574–81.
- 2 Ferguson A, Glen M, Ghosh S. Crohn's disease: Nutrition and nutritional therapy. *Bailliere's Clinical Gastroenterology* 1998; **12**:93–114.
- 3 Ghosh S, Shand A, Ferguson A. Clinical Review: Ulcerative colitis. *BMJ* 2000; **320**:1119–1123.
- 4 Campbell S, Ghosh S. Ulcerative colitis and colon cancer: strategies for cancer prevention. *Digestive Diseases* 2002; **20**:38–48.

- 5 Hanauer SB, Feagan BG, Lichtenstein GR *et al.* Maintenance infliximab for Crohn's disease: the ACCENT I randomised trial. *Lancet* 2002; **359**:1541–9.
- 6 Fraser AG, Orchard TR, Jewell DP. The efficacy of azathioprine for the treatment of inflammatory bowel disease: a 30 year review. *Gut* 2002; **50**:485–9.
- 7 Nayar M, Rhodes JM. Management of inflammatory bowel disease. *Postgrad Med J* 2004; **80**:206–13.

**Key words** Azathioprine, CARD15/NOD2 mutations, Crohn's disease, DLG5 mutations, immunomodulator drugs, inflammatory bowel disease, methotrexate, OCTN1 mutations, ulcerative colitis.

**Sponsors** None.

**Declaration** No conflict of interest declared.  
**Hyponatraemia for the general physician**

Dr C Thompson, Departmental Head, Academic Department of Diabetes and Endocrinology, Beaumont Hospital, Dublin, Ireland

**Abstract** Not available at the time of going to press.

## SESSION 2

Chairman: Professor N Douglas, President, Royal College of Physicians of Edinburgh, Edinburgh, Scotland

### **Are targets for diabetes care realistic?**

Dr P Winocour, Consultant Physician, Queen Elizabeth Hospital, Welwyn Garden City, England

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**Background** Guidelines for diabetes care have set targets for biomedical measures. These have been based on outcomes from research studies and have developed into national standards, now integral to quality measures of diabetes care and the basis for new contracts for primary care in the UK.

**Methods or Theme** In this presentation I will contend that such an approach is inappropriate for routine diabetes care and that individualisation of care based on the same research study database can improve outcomes.

There are a range of rate limiting steps, which are fundamental in diabetes care. These include risk of hypoglycaemia, obesity, drug efficacy and compliance, and issues with polypharmacy and the natural history of diabetes.

Health strategies in the UK have now politicised aspects of diabetes care, with financial and professional consequences. This could lead to perverse incentives and inappropriate clinical practice.

**Conclusions** Pragmatic individualised care can still lead to effective management of diabetes and reduce the burden of microvascular and macrovascular complications.

### **References**

- 1 Winocour PH. Effective diabetes care – a need for realistic targets. *BMJ* 2002; **324**:1577–80.
- 2 Winocour PH. Drug therapy for prevention of cardiovascular disease – should surrogate measures be abandoned? *Clin Med* 2005; **5**:282–286.
- 3 Channer KS. In response: – surrogate measures should be abandoned. *Clin Med* 2005; **5**:287–8.
- 4 Winocour PH. All adults with type 1 diabetes should not routinely receive statin therapy. *Pract Diabetes Int* 2005; **22**:231–2.
- 5 Reckless JPD. Statin therapy should be considered routinely for people with diabetes mellitus. *Pract Diabetes Int* 2005; **22**:233–5.

**Key words** Blood pressure, diabetes, glycaemia, lipids, statins, targets.

**Sponsors** None.

**Declaration** No conflict of interest declared.

## THE JAMES CAMERON LECTURE

### **The Polypill concept: grasping the preventive opportunity**

Professor N Wald FRS, Director, Wolfson Institute of Preventive Medicine, London, England

**Abstract** Not available at the time of going to press.

## SESSION 3

Chairman: Dr M Jones, Consultant in Acute Medicine, Ninewells Hospital, Dundee, Scotland

### **Organising Acute Services**

Professor Sir G Alberti, English National Director for Emergency Access

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**Abstract** Acute services were for long the poor relation of hospital services in England. In 2000 the NHS Plan introduced a target for the length of time people were to spend in A&E. This together with the publication of Reforming Emergency Care in 2001 and the setting up of the Emergency Care Collaborative has transformed emergency care in England. There is now much focus on the total patient pathway, including improved care in the community and streamlining processes in acute hospitals beyond the A&E department. Key to this has been the development of assessment units and the rebirth of the acute physician. The further changes required to consolidate the changes and improve care particularly for the elderly and those with long term conditions will be discussed.

## References

- 1 NHS Plan 2000; Department of Health
- 2 Reforming Emergency Care 2001; Department of Health
- 3 Alberti G. Transforming Emergency Care, 2004. Department of Health

**Key words** Acute services, Emergency Care Collaborative

**Sponsors** None.

**Declaration** No conflict of interest declared.

## Organising Acute Medicine

Dr D Bell, Associate Medical Director, Royal Infirmary, Edinburgh, Scotland

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**Abstract** This talk will discuss the the historical background to Acute Medicine and demonstrate the need to continue to develop this area to ensure high quality medical care. Data demonstrating concerns about medical care will be discussed and what role Acute Medicine has in improving care and patient outcomes.

The role of the Medical Assessment in delivering this agenda will also be discussed

Training needs for medical and non-medical staff will be explored. A new competency based curriculum is being developed for trainee medical staff.

**Sponsors** None.

**Declaration** No conflict of interest declared.

## Management of Community Acquired Pneumonia in adults

Professor J Macfarlane, Professor of Respiratory Medicine, Nottingham City Hospital, Nottingham, England

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**Background** Community acquired pneumonia in adults is important as it is one of the five most common causes of medical emergency admissions, still has a mortality of 6–15% in hospitalised adults and up to 50% in those who require intensive care management. It is also a not uncommon cause of complaint and litigation where there have been problems with diagnosis and treatment.

**Methods or Theme** Evidence based, up-to-date guidelines are available for the management of CAP in hospital and also in the community. A logical approach to the management of CAP includes making the correct diagnosis on admission and differentiating CAP from other common medical emergencies such as pulmonary infarction and pulmonary oedema. Initial

antibiotic choice will inevitably be empirical and an understanding of the likely pathogens and pointers to less usual pathogens is essential when deciding initial antibiotic therapy. Delays in starting appropriate are associated with worse outcome. Severity assessment is crucial to planning both antibiotic and general management but also deciding site of care (which may include outpatient, early discharge or critical care management. The results of investigations will contribute to the management algorithm.

Once the patient has been admitted, regular review is important and the 'post take ward round' has particular value in this regard.

A proportion of patients with CAP will not improve as quickly as expected. The correct approach to a patient who is failing to improve requires a logical assessment of the different possibilities. 'The A–F' approach is suggested, reviewing in turn the Antibiotic choice, likely Bugs, Complications, Diagnosis (is it correct?), Expecting improvement to soon and other and other Factors. Common and unusual examples will be discussed.

**Conclusions** The prompt diagnosis and correct management of CAP improves outcome of this common condition. A logical approach to initial management and subsequent review is essential for Doctors involved in acute medicine.

## References

- 1 Lim WS, van der Eerden MM, Laing R *et al.* Defining community acquired pneumonia severity on presentation to hospital: An international derivation and validation study. *Thorax* 2003; **58**:377–82.
- 2 Lim WS, Macfarlane JT, Boswell TCJ *et al.* SCAPA: Aetiology and outcome of adult community acquired pneumonia. Implications for management guidelines. *Thorax* 2001; **56**:29–301.
- 3 Macfarlane JT, Boswell T, Douglas GD *et al.* BTS guidelines for the Management of Community Acquired Pneumonia in Adults. 2004 update. [www.brit-thoracic.org.uk/guidelines](http://www.brit-thoracic.org.uk/guidelines)
- 4 Committee of the British Thoracic Society\* British Infection Society, Health Protection Agency acting on behalf of the Department of Health. Clinical Guidelines for Patients with an Influenza Like Illness during an Influenza Pandemic. ([www.dh.gov.uk/assetRoot/04/12/17/55/04121755.pdf](http://www.dh.gov.uk/assetRoot/04/12/17/55/04121755.pdf)), published as part of the Chief Medical Officer's Pandemic Influenza Plan published 19.10.05 ([www.dh.gov.uk/PolicyAndGuidance/EmergencyPlanning/PandemicFlu/fs/en](http://www.dh.gov.uk/PolicyAndGuidance/EmergencyPlanning/PandemicFlu/fs/en)).

**Key words** Community acquired pneumonia, failure to improve, empirical antibiotic strategy, severity assessment.

**Sponsors** I am grateful to the British Lung Foundation and the Wellcome Trust (HOM) for Grants towards studies of respiratory tract infections over the years.

**Declaration** No conflict of interest declared.

### **Fever in the returning traveller**

Professor D Nathwani, Consultant Physician and Honorary Professor of Infection, Ninewells Hospital, Dundee, Scotland

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#### **Abstract**

**Introduction** Between 1993 and 1997 there has been an overall mean 35% rise in international travel. Travel to Africa and South and South-East Asia, the two commonest areas for fever in returning patients, has seen on average above 40% rise. Whilst infections account for 1–4% of mortality in traveller's abroad there is evidence of substantial morbidity. Traveller's diarrhoea, malaria and acute febrile respiratory tract infections account for the majority of this morbidity.

**Aim** The lectures aims to provide the general clinician with a clinical decision making process based on knowledge and clinical syndrome recognition that will help in the assessment, diagnosis and management of the returning febrile traveller. The presentation uses a variety of common and more exotic clinical scenarios to illustrate this process.

The following components are key in this process:

- 1) The importance of the travel, occupational and recreational history within the context of a general medical history.
- 2) An appreciation of the common causes of fever from abroad and the clinical syndromes with which they present.

3) Knowledge of the timeframe within which common infections are likely to present on returning home.

4) Illustration of the presentation, diagnosis and management of common infections such as malaria, respiratory tract infections (Flu, SARS, Legionella etc) and gastroenteritis.

5) The value and interpretation of core investigations.

6) The occurrence of uncommon infections within the context of fever related to clinical syndromes and the importance of 'cluster' recognition or atypical manifestations in diagnosing potential outbreaks.

7) The availability and value of specialist information and help in recognising and managing these travel related infections.

#### **References**

- 1 Ryan ET et al. Illness after international travel. *N Engl J Med* 2002; **347**:7:505–15.
- 2 Nathwani D. How I Manage the Returning Febrile Traveller. *J R Coll Physicians Edinb* 1998; **28**:24–33.
- 3 Travax website for registered NHS users (useful for prevention of travel illness and update on outbreaks etc) [www.travax.scot.nhs.uk](http://www.travax.scot.nhs.uk)

**Key words** Diarrhoeal diseases, febrile respiratory tract infections, fever, malaria, returning traveller, travel history.

**Sponsors** None.

**Declaration** No conflict of interest declared.